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THIRD ANNUAL REPORT
—OF THE—
PROVINCIAL
BOARD OF HEALTH
—OF—
ONTARIO
—
1884.

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THIRD ANNUAL REPORT
OF THE
Ontario
PROVINCIAL BOARD OF HEALTH
OF ONTARIO,

BEING FOR THE YEAR 1884.

Printed by Order of the Legislative Assembly.



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PROVINCIAL BOARD OF HEALTH OF ONTARIO.

CHARLES W. COVERNTON, M.D., *Chairman.*

HORACE P. YEOMANS, B.A., M.D.

WILLIAM OLDRIGHT, M.A., M.D.

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JOHN GALBRAITH, M.A., C.E.

PETER H. BRYCE, M.A., M.B., *Secretary.*

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THIRD ANNUAL REPORT

OF THE

PROVINCIAL BOARD OF HEALTH.

TO HIS HONOUR THE HONOURABLE JOHN BEVERLEY ROBINSON,
Lieutenant-Governor of the Province of Ontario.

May it please your Honour :

The Provincial Board of Health begs leave respectfully to present this its Third Annual Report. The work of the year has been exceedingly gratifying, as we have had evidence, as a result of the broad-cast dissemination of sanitary knowledge by pamphlets, health conventions, and numerous other means that have been at the quarterly meetings of the Provincial Board determined on, in an intelligent appreciation of the nature of epidemic disease, and an increased knowledge of the best means for its prevention or limitation. The growing appreciation of the work of the Provincial Board has been made abundantly evident by the wide-spread solicitude for the prevention of disease that has been demonstrated in the yearly increasing correspondence that our Secretary has had to reply to. There remains yet a great deal of good work to be done, and if the accomplishment of it proves slower than we would wish, we may take heart of grace in the remembrance that whilst in modern times it has been easy enough to believe that in the darkness of the Middle Ages people poisoned themselves by their own filth, and therefore suffered terribly from the ravages of preventable diseases, yet all communities were slow to believe that familiar diseases like Scarlet fever and Typhoid fever, which they had been in the habit of considering more or less inevitable, were not, perhaps, equally preventable with Cholera and Typhus ; and it was with surprise that people not educated in medicine heard during the past few years that one of the first authorities now living, Mr. Simon, had described a large class of maladies as filth diseases. The inhabitants of Europe were taught their first lesson in Preventive Medicine by their Mahomedan enemies, and more attention to cleanliness made the two dreaded diseases, Black Death and Plague, almost unknown. In this conflict with dirt as a cause of disease the beneficial effects of legislation are quaintly described by Captain John Gaunt more than two hundred years ago. Speaking of the freedom of London from the Plague and discussing the causes of this freedom he says, "Whether we are to become less apt to breed or to receive this dreadful evil, one of the causes of this happy event seems to be the greater freshness and purity of the air of London since the rebuilding of it after the great fire, the streets being made wider and the inhabitants not crowded so closely together ; as it is, perhaps, owing to its being more thinly peopled than the rest of the world that America has never yet been visited with the plague, while the crowded and filthy streets of Cairo and Constantinople are seldom free from it. Another and probably the most effectual preservation has been the great quantity of water from the Thames and the New River, which for the last century has washed the houses so plentifully, and afterwards running down into the

kennels and common sewers, constantly hinders or weakens the tendency to putrefaction; and if more water could still be derived into our houses, streets, and common sewers, it might, perhaps, fully make amends for the imperfections of quarantine arising from the thoughtlessness, negligence, avarice, and obstinacy of those who may have the direction of them, or of those by whom they should be performed." We have, then, here clearly pointed out three of the great health factors—pure air, pure water, and freedom from the poisonous organic emanations of dense population. For overcoming ignorance, prejudice, and criminal apathy, unceasing efforts are required. Nearly three-quarters of a century elapsed after the discovery of the means of preventing scurvy before they were sufficiently appreciated to be used in the Royal Navy, after long years of representations to the Government of the day by Sir Gilbert Blain; and it has taken a long period of time for the general understanding to be arrived at that Preventive Medicine may in a great measure be resolved into the broad principles of pure air, pure water, pure soil, and clean houses. Forty or fifty years ago Preventive Medicine consisted in trying by quarantine to keep out disease; now it consists chiefly in removing the conditions favourable to its existence and spread.

Among the causes that have contributed to break the force of infectious diseases may be placed in the first rank the improved sanitary conditions under which we live, and the increasing knowledge of the nature of epidemic diseases, and the way in which they are propagated; but even in the present day, the mortality from infectious diseases forms an extraordinarily large portion of the total mortality. The germ or *contagium vivum* theory of disease is not, as by many conceived, exclusively of modern conception, for the theory that the poison of infectious diseases consists of living creatures, or low organisms, is to be found among the writers of antiquity, was revived two centuries ago by Lancisi, Leenwenhœck, Reaumur and others; again, however, to be discredited until within the middle of the present century, when the idea was again elaborated by Henlé. Since 1840 extended microscopic investigations have demonstrated the mode of propagation and significance of these low organisms; new facts in regard to the extension of epidemic diseases, and the reliable discoveries of numerous investigators, have been the means not only of furnishing definite proof of its correctness, but of leading to results of the greatest theoretical and practical importance. The most important of these results, viz., the knowledge that the poisons of infectious diseases can reproduce themselves, and breed true to an unlimited extent, Liebermeister forcibly illustrates in the virus of vaccine. With a minimum quantity of this we vaccinate a child and obtain vaccine virus from him. From this child ten, and even more children, may be successfully vaccinated; from each one of these children ten more in turn, and so on. So that what at first was a scarcely appreciable quantity of the virus of the disease is sufficient to produce it in 1, 10, 100, 1,000, 10,000 children, until the virus loses its force and a necessity arises for returning to the animal virus. As with vaccine virus, so with that of Small-Pox, Measles, Scarlet Fever, Typhoid, Syphilis, Blennorrhœas, the poison can be multiplied to an endless extent. The peculiarity of infectious diseases is their specificness; i. e., a given kind of disease is solely due to a given kind of morbid agent or cause. Inoculation, with the virus of Small-Pox, produces alone Small-Pox; infection from a patient with Measles, produces Measles; germ of Cholera, Cholera alone, and the same limitation of effect from the specific germ of all other infectious diseases. From this specificness the conclusion has been naturally enough arrived at, that these various diseases never originate spontaneously, but are dependent on a transmission, a continued propagation of the disease poison. The study of germs as causative of specific disease, by Henlé, Sanderson, Pasteur, Koch, Cohn, Klein, and many others, has, within the last few years, been attended with most promising results in the cause of Preventive Medicine. We have acquired much, and hope to obtain more, knowledge of diseases, to be able to remove the cause of many, diminish the perils arising from others, save many persons from inevitable death, and by observance of sanitary precepts, prolong the duration of life. Fuller knowledge of the exciting causes of disease has enabled the profession to advance greatly in their prevention. The advantages that have resulted in England and Wales alone may be seen in the general death-rate, which, on an average, has been steadily declining for the last twenty years, particularly since the passing of the English Act of 1875. Steady average progress since then has been apparent, the decrease, as

shown by Dr. Finlay, being from 22.8 in 1875, to 18.9 in 1881, and 19.6 in 1882, the last year from which the complete returns of the Registrar-General have been published. Stated in numbers, the following results are shown by this gentleman :

Taking for comparison with the years subsequent to 1875, the average death rate of the ten years, 1866 to 1875 inclusive, is 22.2. The same rate in 1876 would have meant the death of 30,699 persons who were alive at the close of the year. In 1877, 47,821 additional persons would have died ; in 1878, 15,860 ; in 1879, 36,981 ; in 1880, 42,226 ; in 1881, 86,619 ; and in 1882, 69,714. If, then, these figures are correct, we have a saving of lives amounting to more than 329,000. Referring to the last three cholera epidemics, Dr. F. sees further ground for the influence claimed for sanitary medicine in diminishing mortality. The epidemic of 1848-49 was responsible for 54,398 deaths ; the fatality of that of 1854 was represented by 20,097 ; while in that of 1865-66 only 14,378 lost their lives, a fourth only of the mortality of the first-named epidemic. We find then in these figures of greatly diminished mortality from epidemic cholera the most convincing evidence that by a strict observance of sanitary laws, equally by individuals as by communities, as also by great vigilance at our sea ports, this dreadful disease, if it should visit our shores, as in previous outbreaks in Europe it has after an interval of varying duration constantly done, would in a very great measure be robbed of its terrors. Under the operation of the Health Act for this Province, passed the last Session of the Provincial Parliament, the Provincial Board have reason for congratulation in the advanced means supplied for bringing before the inhabitants, through the instrumentality of Local Boards, the means for securing improved systems for the removal of nuisances, thus leading to a greatly improved sanitation. Since the 1st of July of last year there have been established in the Province 400 Local Boards of Health, two-thirds of all the municipalities thus possessing local health organizations. In the total of 447 townships there are 184 Boards. Of these 184 Boards, 25 of them have appointed Medical Health Officers, and 19 of them have appointed Sanitary Inspectors, while 17 of them have appointed both Medical Officers and Sanitary Inspectors. Of the 203 cities, towns and villages in Ontario, 180, or more than six-sevenths, have Local Boards of Health. Of this number of Boards 155 either have a Medical Health Officer or Sanitary Inspector, while 63 of them have Medical Health Officers, 92 have Sanitary Inspectors, and 44 Boards have both a Medical Health Officer and Sanitary Inspector. From this statement it will appear that under the operation of these Local Health Boards so numerous established, the work of diminishing the spread of Cholera and other infectious diseases by timely sanitary precautions will be greatly facilitated, and the Province generally placed in the requisite state of preparedness. From the visit of the delegates sent by the Dominion and Ontario Governments to the conferences of the State Boards of Health of the United States, the first on the 7th of October at St. Louis, and the second at Washington on the 10th of December, there is reason for believing that greatly increased precautions will be taken at the several English ports in the inspection of crews, passengers and cargoes of all ships leaving for either American or Canadian ports : all the delegates concurring in the opinion that in the past many necessary preventive measures have been either performed in a very perfunctory manner, or entirely neglected, and, as a consequence, on this side of the Atlantic we have been exposed to epidemics of European importation, that might have in a great measure been prevented or by timely warning limited in extent. Measures at these conventions, and in subsequent interviews with the British Ambassador and Sir John Macdonald, were proposed which, if carried out by the Medical Health Officers of the various British seaports, will greatly tend to the minimising of the dangers to which we have hitherto been exposed.

The Board would further observe that whilst at European ports many precautions might be initiated calculated to diminish the danger of importation of epidemic disease ; there are also additional precautions to be observed at our own Quarantine Stations, as at Rimouski, Grosse Isle, and Quebec, in order to secure the desired immunity, such as suitable Houses of Detention for passengers who have been exposed during the voyage, or previous to embarkation, to infection, but in whom in this age of rapid transportation the period of incubation had not elapsed ; and as an additional precaution in the instance of individuals who have received the infection into their systems only a few days before

the arrival of the ship, and the period of incubation consequently not terminated,—the appointment of Health Officers at different points along the lines of our great trunk railroads, clothed with the necessary powers for removing the infected for treatment at properly fitted-up isolated buildings, and, if judged necessary, ordering the detention of the exposed for the requisite period of time for determining whether they had taken the contagion.

In the recent Act for making further provisions respecting the public health, excellent and comprehensive as it is, there is one omission that calls for notice, and which at the next meeting of the House it is to be hoped may be provided for, viz., the practice of intramural interments in the two Cathedrals of the city of Toronto, and the nearly equally objectionable practice of public cemeteries in very close proximity to towns and villages, without due regard being had to the nature of the soil, where, in the estimation of joint stock companies, they could be most remuneratively located. Fully realizing the danger that sooner or later might accrue from this dangerous custom, the Board issued a circular inviting answers to questions of locality. In a large number of instances the burial places were on the outskirts of the villages, towns, or cities, and in a very large proportion the soil sandy. In one city the cemetery was on outskirts of the city, twenty feet above the level, and soil sandy. In several towns two cemeteries were within corporation limits. In one village two cemeteries were in its centre, with sandy soil. The inhabitants have been frequently warned of the danger by a resident medical man, who has vainly sought to have them closed. In the eighty answers received, there is a large proportion indicating danger at no distant date. The influence of a cemetery on the hygienic conditions of the neighbourhood varies according to the nature of the soil, the abundance of ground water, the number interred, etc., etc. An absolute answer, therefore, to the question of amount of danger to the public can scarcely be given, as each case would involve a minute investigation on the nature of the soil destined for such a purpose. There are, however, certain points concerning the choice of ground for a cemetery formulated by Dr. Go-se in his Report to the Fourth International Congress of Geneva, held in September, 1882, which should be generally accepted:—

- (a) Limey and flinty soils, situated on the declivities of land, should be chosen.
- (b) Permeable clay soils mixed with sand and gravel should only be chosen when none other can be found.
- (c) Soil formed of compact clay should not be utilized for cemeteries before being submitted for a long time to cultivation. To these conditions it is necessary to add that a soil should not be used where the ground water reaches the bottom of the graves, so that the coffins are surrounded by water.

One of the important provisions of the new Health Act, page 2, section 3, being with regard to the powers of the Provincial Board to make regulations for the prevention or mitigation of threatened epidemics, it will therefore be in order to detail the precautions taken by the Board since the danger of cholera has become imminent, in addition to the ordinary sanitary precautions impressed upon the local sanitary authorities, viz.:—

1. Articles in leading journals regarding the urgency for efficient Dominion quarantine.
2. A circular to all cities, towns, and villages, requesting immediate information on local sanitary conditions.
3. A careful consideration of the dangers from cholera, taken at the August quarterly meeting, and the adoption of resolution. *Vide* Appendix.
4. Communication of these, with request for concerted action, to Dominion and to other Provincial authorities.
5. Attendance at the St. Louis and Washington conferences, and to the repeated urging of the Reports adopted at these conferences upon the Dominion Government.
6. With reference to the question of the amount of local sanitation accomplished, it may be stated that the various Local Boards have reported their organization from almost every city, town and village in the Province, and from nearly half of the townships,

many of which are sparsely settled. Nearly 75 per cent. of the total population are under sanitary control. The Health Act of the present year requiring annual reports to be sent by the Local Boards to the Provincial Board, we have to acknowledge over two hundred received, many voluminous, and all displaying both intelligent appreciation and surprising progress in the work of local sanitation that has been placed upon them since the passage of the new Health Act. In illustration of the successful working of this Act, a brief reference of successful limitation of an outbreak of Small-pox, through the active agency of our secretary, may with propriety here find place. Full details are given in the Appendices. On the 18th of November, Dr. Bryce was telegraphed to visit the Township of Hungerford, to decide whether the outbreak was really one of Small-pox. On the 19th, finding on his arrival that this disease had to be dealt with, he took the necessary steps for the appointment of a Board and the nomination of fifteen sanitary inspectors for five villages, inducing the township to pass a grant for the necessary expenses, to appoint a Medical Health Officer for the township, and to swear in special constables to prevent the exposure of the uninfected with the infected. He caused to be extensively printed and placarded the clauses of the Act relating to disinfection, and addressed letters to the railway officials requesting them to give orders to conductors of trains to allow no passengers to board without a certificate from the Medical Health Officer. A stage line was also subjected to the same conditions. On the 29th, on again visiting the township, he found established an isolation hospital, and caused careful quarantine precaution to be taken. On the second of December he made a third visit, taking with him two medical men from Toronto, one to co-operate with the local Medical Health Officer in control of a district, and to act as a public vaccinator and to organize and superintend a fumigating corps, and the other to take charge of a number of families in an outlying district. Finding that the panic had become wide-spread, and that but few of the uninfected had remained in Stoco village, Dr. Bryce, on returning to Toronto, secured the services of a trained nurse for hospital aid, and of three experienced men to act as sanitary policemen and as a fumigating corps. The second day of the arrival of the physician in the outlying district he reported to the Provincial Board that he had visited thirty-one patients not previously seen by a medical man.

From the ladies of Toronto and Belleville a large supply of complete suits of clothing was sent to the fumigating corps, to replace the infected apparel destroyed. Of the two hundred and two cases, some time ago reported, there was a record of forty-five deaths. For the safety of our population from this disease, it is a matter of great regret that clauses 4, 5, 7, 8, and 9 of the Act relating to vaccination, page 1970 to 1973, vol. 2, Revised Statutes, Ont., should not be rigidly enforced, as a somewhat similar Act is in England. We find in the thirteenth annual report for 1883-84, sent to our Board by Dr. Buchanan, the Medical Officer of the Local Government Board, that the public vaccination of the country was supervised during the year ended December 31st, 1883, by the Board's Medical Inspectors, whose inspections included 340 Unions, containing 1,645 vaccination districts. The allegations of injury from vaccination had in several instances formed the subject of inquiry by the Board's Inspectors, the result reported not bearing out the charge. From the customary analysis of the returns of vaccination officers in England, made for the year 1881, it appears that no more than 3.8 per cent., or, with inclusion of postponed cases in consequence of unfitness of children at the time of presentation, 4.5 of the births registered during that year are unaccounted for as regards their vaccination. The local registers show 86.6 per cent. of the children born in the year to have been successfully vaccinated, and 8.8 per cent. to have died within the period during which they may lawfully remain unvaccinated. Dr. Buchanan mentions that in the year 1881 the deaths from Small-Pox among the relatively few unvaccinated children in England and Wales were very closely ten times as numerous as among the twenty fold larger number of vaccinated children, the rate of mortality in the two classes differing about as 200 to 1. During the last year we have had in Ontario several outbreaks of Diphtheria, notably one at Smith's Falls, and in many instances the outbreak has been referred to impure water supply, in some isolated cases to sewer gas finding entrance into the dwelling, both of which are likely to be causative. As, however, epidemics of this disease occurring in England have been clearly traced to the milk supply, I quote a passage from report of its appearance in

strange groups of cases in parts of England different and distant from each, in one instance by Mr. Power, and in another by Dr. Parsons, Inspectors of the Department. Mr. Power, in his investigation of the epidemic at Hendon, that had occurred in the practice of Dr. Cameron, says, "the results of more extended inquiry tend to confirm the *prima facie* conclusions of Dr. Cameron. For, bringing into account all throat illness that could be heard of as having occurred in the village during the first ten days of January, there were 15 houses invaded, all but two of which had obtained milk from a particular dairy that had been called in question; all the definite Diphtheria attacks and all the fatal cases occurred among customers of this dairy. It was found that the sewers from that portion of the village wherein are situated the residences of the cases that occurred in November, discharge into a ditch, which eventually passes within 22 paces of, and at a higher level than, a certain pond from which the particular dairy farmer drew water for his dairy purposes."

In England, as at the Johns Hopkins University at Baltimore, during the last year, most important investigations in the use and application of disinfectants or germicides have been instituted, in the former country by Drs. Burdon Sanderson, Klein, and Dowdeswell; in the latter by Dr. Sternberg, United States Army, Dr. Raymond, Brooklyn, Dr. Rohé, Baltimore, and a staff of assistants. The report of these gentlemen will, in a few weeks, be published. From the English scientists a report will be found in the appendices to the 13th Annual Report of Local Government Board for 1883-84. They concern chiefly the question of infection, and from the labours of these gentlemen great medical results have been arrived at.

Mr. Dowdeswell reports on the "Charbon Symptomatique," supposed to be identical with the black quarter or quarter evil of English veterinary surgeons. The principal interest of this disease to pathologists is the nature of the relation in which these microphytes stand to the production of disease. A bad epidemic of sore throat, was clearly traced last year at Dover, England, to the prevalence of this disease among the cows of a dairy farm in the vicinity. Four hundred cases of sore throat occurred in a week among the customers who had been supplied with milk from this source; it is obvious, therefore, that skilled veterinary surgeons should be appointed by the Ontario Government to inspect the cows of all dairy farms at such intervals as may be determined on, and thus prevent the dissemination of the pathogenic germs determining specific disease. It may be, perhaps, argued that the presence in the blood, secretions and excretions of various germs, is no absolute evidence of causation of disease. They have certainly, however, the character of specificity, the various germs of Scarlet Fever, of Cholera, of Smallpox, for producing only these respective diseases, whether they may be antecedent or only the result of the morbid conditions in which they are found. We do, however, know as a certain fact that the germs of infectious diseases can reproduce themselves to an unlimited extent.

In view of the importance which the probable introduction of Cholera during the coming year, has to the public, and in connection with the work of the Board, we deem it proper that some special reference to the history of the disease in the past should be made. In Parkes' Hygiene, vol. 1, page 53, we read that in 1849 the late Dr. Snow, in investigating some circumscribed outbreaks of Cholera in Horsleydown, Wandsworth and other places, came to the conclusion that in these instances the disease arose from cholera evacuations finding their way into the drinking water. In 1854 occurred the celebrated instance of the Broad Street pump in London, which afforded more convincing evidence that in that instance the germ or poison of Cholera found its way into the body through the drinking water. Mr. Radcliffe in 1865 recorded a remarkable and undoubted case of Cholera from water poisoning, and in 1866 an unequivocal case of the production of Cholera by drinking water from a tank on board a steamer at Southampton. The late Professor Graves, of the Dublin School of Medicine, in his most valuable work, entitled "Studies in Physiology and Medicine," remarks:—"It is strange what a general disinclination has existed for some time in Great Britain to allow that diseases are contagious. The influence of capital has for obvious reasons been brought to play, and every expedient has been resorted to, no matter at what danger to the public health, to try to diminish the stringency of the quarantine laws, and thus to remove the obstacles of trade." Among a large number of cases cited by this eminent teacher in proof of the contagiousness of this

disease, I select the following. The first is a communication from Sir James Simpson, of Edinburgh, who states that in the Cholera hospital of that city four nurses were attacked, three died. Another communication from Dr. Dillon, of Tuam, that four out of ten nuns engaged in attending the sick with this disease died, and three of the men employed to bury the dead died, and in Castlebar two out of five medical men died. Dr. Little, of Sligo, wrote to Dr. Graves, that of nine physicians attending the sick in Sligo seven died. Cholera first appeared in Tuam on 4th of June, 1832, having attacked Galway, the nearest seaport, on the 12th of May. The first case was a fish kedger's wife, who had purchased the clothes of a woman who had died in the Cholera hospital at Galway. She died the following night. Her sister, from a remote part of the town, who attended her and washed her body, was the second victim. A relative from a neighbouring village, who attended her and assisted in the washing, was the third. None lived over twelve hours. Cholera ceased for the first time in Tuam in August; the bedding was all put up clean in store. In September, the court house, which had been the temporary hospital for cholera cases, was required for the sessions. The apothecary with two other persons were employed for nearly a whole day in the removal of the stores. The apothecary and one of the men were seized with Cholera the following night and died.

Another letter from Dr. Little to Professor Graves contains the following paragraph:—"There was scarcely a single case which I had, out of 550 attended in Tuam in 1832, which I could not and did not trace to contagion as satisfactorily as ever such a tracing could be effected. Every case of cholera which came from any house was followed by one, two or three more, and in many instances where patients returned from the cholera hospital, cases were brought in from the houses into which they went within twelve or twenty-four hours after their entrance. In Central India Dr. Townsend, in his report on Cholera, has given strong reasons for believing that the cholera of 1868-69 was to a large extent dependent on water fouling. Dr. Macnamara has given some good evidence on same side, and Dr. Cleghorn has noted striking proofs of the same facts. Professor De Chaumont, in the last edition of Parkes' Hygiene, furnishes a large number of cases equally illustrating its contagious nature, and arrives at the conclusion that the cholera evacuations, either at once or after undergoing some special fermentative or transformation change, pass into the drinking water or float in the atmosphere, being in either case received into the mouth and swallowed, and produce their effect directly on the mucous membrane or are absorbed into the blood. Lebert, in his history of Asiatic Cholera, states its first appearance at Jassore in 1817. In this first year the number of cholera victims in India is given at 600,000. In 1818 Cholera spread all over the Bengal presidency, and yearly epidemics followed with great loss of life until 1823, in which year it penetrated to the foot of the Lebanon. In 1831 the central region of the Russian Empire was seized upon, and in October, 1831, it reached Sunderland on the east coast of England. In 1832 it crossed the Atlantic ocean and appeared in North America. It was very severe in Quebec and Montreal, and New York was attacked as early as July, and Philadelphia and Baltimore in rapid succession. Dr. Lebert remarks that the manner in which cholera attacks persons who come in contact with patients, their discharges, linen or dead bodies, is perfectly in harmony with the germ or parasitic theory of the disease. The resident physicians, assistants and nurses are much more frequently attacked. Their contact with the sick is much more protracted, and not unfrequently local epidemics are developed in hospitals which infect transient visitors rarely or but slightly, while residents or those whose stay is longer, are attacked much more frequently and intensely. It must be clearly the cholera germs to which is due the frequency of attacks among washerwomen. Whenever they wash linen soiled with cholera dejections, without any precaution, they are attacked in all places in no small number. In Branson, in the canton of Valois, in 1867, one of the Sisters of Charity nursed with the greatest self-sacrifice all the cholera patients in very filthy chambers, and yet remained healthy. At the close of the epidemic her sympathy prompted her to assist in washing the soiled linen, when she was attacked with the disease and died. It was from a washerwoman, who died after washing the clothes of a cholera fugitive, that the epidemic developed later in Zurich in 1867. There can be no doubt that infected drinking water may act injuriously in the spread of Cholera.

Frankland, "On the water supply of London and the Cholera," in *Quarterly Journal of Science*, 1867, relates a striking example of this:

On the 18th of August, 1866, a family removed from London to Margate; on the 26th there was a storm, with a heavy fall of rain, and the water had an unusual colour and taste. On the 27th four persons were attacked with Cholera, on the following day still more, the most of whom died. The cess-pool adjoining the garden had clearly poured its contents into the well after the overflow caused by the rain, and this had caused the fatal contamination. It was proved that all who were attacked had drunk from the well. The inhabitants of London who used Thames water from Kew, some miles above London, showed a mortality of only 8 to 10,000, those who used Thames water at Hammersmith 17 to 10,000, those from Battersea to Waterloo Bridge—water contaminated by city sewage—163 to 10,000. The various epidemics of Cholera in Europe, as also in this country, furnish a very large number of convincing instances of the contagiousness of Cholera from water contaminated with the cholera poison or germ, or from exposure to soiled clothing, or from clothing that had been washed without disinfecting precautions. But sufficient evidence has been adduced to justify the Report of the Committee appointed for considering the means to be adopted—State and International—for diminishing the chances of the introduction of the disease from Europe to this continent, at the Convention of State Boards held last October at St. Louis, Mo., and subsequently endorsed at the adjourned meeting at Washington on the 10th of December. Under existing systems of rapid, almost daily, intercourse between the two continents, absolute exclusion is impossible; at the same time it is quite possible to minimize the danger by a most rigid watch on travel, and on goods imported, by detention for the period of incubation of the disease of all persons who may have been exposed, and by agitating for co-operation with British and European Governments in the important work of isolation, detention, provision for treatment of the first premonitory symptoms, and requisite disinfection. Concerted action with the American State Boards and the Provincial Board of Ontario has, at the Conventions mentioned, been arranged, and from interviews held by the delegates from our Province and delegates from Province of Quebec, with the British Ambassador at Washington, and subsequently with Sir John Macdonald, the Board has reason to hope that the subject of increased vigilance at ports of departure will be pressed on the attention of European Governments, and thus secure to the people on this side of the Atlantic a greater immunity from the importation and spread of infectious diseases than has existed in the past.

The Secretary's Report will embrace a detailed statement of the work of the year, which has largely increased since the coming into operation of the new Health Act. That this has worked admirably in the cause of improved sanitation, and has enabled the Board to give practical effect to the work of education in Hygiene, to which, under previously existing legislation, it had been confined to the mere circulation of literature on the subject, is certainly a matter for congratulation.

Full reports of investigations into causes of disease, malarial or zymotic, will appear in the appendices; it may be well, however, to pass very briefly in review the various subjects that have occupied the attention of the several members.

Outbreaks of Typhoid having occurred during last year, a very brief notice of individual efforts may be here recorded. Information of the existence of Typhoid at the Reformatory at Penetanguishene having been sent to the Board, Drs. Oldright and Bryce made the requisite examination, suggested alterations in the drainage, plumbing, ventilation, and water supply, on the completion of which followed a return to health. Similar investigations and recommendations were subsequently made at the Lunatic Asylum at Kingston by Drs. Oldright and Rae. An inspection of the ventilation and drainage of the Model School at Toronto was carried out by Drs. Oldright and Cassidy. Drs. Oldright and Galbraith, the members of the Committee on Sewage, have been requested by the municipalities of London West and London East to investigate and report on the present faulty condition of the sewerage and disposal of sewage in that city, which request will be complied with on the call of the officials. Similar request for passing judgment on extension of sewage at Parkdale has been made.

Addresses were delivered by Drs. Cassidy, Oldright and Bryce at the Canadian

Institute, and by the same gentlemen, as also Dr. Covernton, at the Ottawa Convention in March last. Dr. Yeomans conducted to a successful termination an investigation into the causation of an epidemic in the township of Luther. He also delivered a lecture to the school teachers of the County of Haldimand on the 29th of May, on "Sanitary Supervision of Schools" at the convention held in Dunville, in addition to the regular course of lectures on school hygiene that for some years back he has been accustomed to give at the Model School of the County of Wellington.

Investigations during the year were made by the Secretary and other members of the Board at the following places into alleged nuisances and other sanitary matters:—

Teeswater.—Enquiry into nuisance caused by a jam in a stream.

Aylmer.—Information asked *re* system of water works about to be constructed.

Madoc.—Lecture delivered by Secretary before Teachers' Association, *re* sanitary matters.

Point Edward.—Small pox outbreak. *Vide* Report, in Appendices.

Almonte.—Investigation by Secretary *re* Typhoid outbreak.

Smith's Falls.—Visited by Secretary *re* epidemic of Diphtheria. Lecture on sanitary matters delivered.

Parkhill.—Correspondence with Mr. Graham *re* situation of well.

London West.—Investigation *re* mill-dam nuisance.

London East.—Carling's creek nuisance.

Township of East Zorra.—*Re* Small-pox outbreak

Woodstock.—Disposal of sewage difficulty.

Haliburton and Peterboro', and other places.—Investigation into sawdust nuisances.

Township of Flos.—Small-pox case.

Penetanguishene.—Nuisance reported by Drs. Oldright and Bryce.

Cornwall.—Correspondence of Mayor with Secretary *re* building of slaughter-houses.

Township of Carden, Co. of Victoria.—Small-pox case.

Woodville, Co. of Victoria.—Typhoid Fever outbreak.

Galt.—Mill-creek nuisance investigation.

Waterloo Township.—Nuisance from polluted creek, and lecture delivered by Secretary before County Teachers' Association.

Bridgeport.—Nuisance investigated.

Hamilton.—*Re* disposal of excreta. Correspondence with Health Officer by Chairman and Secretary. Lecture by Secretary before County Teachers' Association.

Toronto.—Ashbridge's bay visited by Dr. Oldright and Secretary. Evidence thereon by Dr. Oldright in court.

St. Louis, Mo.—Convention. Delegates, Chairman and Secretary. Report thereon by delegates.

Washington.—Convention. The Secretary appointed delegate, but in consequence of urgent work connected with small-pox epidemic in township of Hungerford the Chairman acted as his representative.

During the year 1884 nine hundred and fifty-seven letters and six hundred postal cards were written to municipal clerks, Health Officers, and other sanitary authorities.

On the 9th of April a copy of circular reviewing the new Public Health Act was sent to 650 municipalities.

On 10th of June the copy of a letter noting the change in the *Weekly Bulletin* was forwarded to 168 medical correspondents, also a copy of a circular of the date of July 16th, noting the extended shape of the *Bulletin*, was sent to the same parties.

On June 2nd 650 municipal clerks received a copy of circular referring them to *Grip* Printing Company for supply of forms.

On July 24th copy of a letter of enquiry was sent to clerks of cities, towns and villages, respecting the sanitary condition of their respective municipalities. Also in July, a memorandum book for the use of Sanitary Inspectors was prepared, and seven hundred copies distributed.

On the 1st of August a copy of regulations determined on by the Board at the quarterly meeting for the prevention or control of outbreaks of Cholera was sent to the Dominion Government, Provincial Governments, municipal clerks, Health Officers, and Sanitary Inspectors.

On August 30th two hundred copies of a circular respecting the influence on health of large deposits of sawdust in streams were sent to correspondents.

On October 20th two hundred copies of a letter were mailed to American and English publishers *re* Reference Library on Public Health.

On 21st of October, a letter asking for as complete a report as possible of the sanitary condition of the municipalities of the Province, 750 in number, was sent to the municipal clerks and Health Officers.

In November, 650 copies of the Report of the Board on the prevention or mitigation of epidemic Cholera in America, were sent to the various municipal authorities. Two hundred and forty-one applications for Reports and pamphlets were received and promptly attended to.

During the year two hundred and fifty requisitions for vaccine virus were received and complied with.

Four hundred notices of formation of Local Boards were received and entered in the register.

Two hundred and twenty-one Annual Reports from Local Boards have been received and acknowledged.

Seven thousand copies of the 2nd Annual Report were sent to municipal clerks, newspapers, mechanics' institutes, public school inspectors, State and city boards of health, every medical practitioner in the Province of Ontario, several in the Province of Quebec, as well as a large number of exchanges in America and Europe. There have been also sent by mail two thousand pamphlets, "How to check Contagious Diseases"; four thousand four hundred "Sewage pamphlets"; four thousand three hundred "Cholera"; eleven hundred By-laws, Schedule A. From January to June six hundred and fifty *Health Bulletins* were sent out weekly, making a total of fourteen thousand three hundred for first six months of the year. For the last half year the *Bulletin* was issued only monthly, and a total of four thousand two hundred copies were mailed.

Twenty-seven secretaries of State Boards of Health, as also secretaries of City Boards, were supplied with the circular issued by Ontario Board on School Hygiene.

One hundred and sixty-eight medical correspondents of the Board were supplied with forms for making weekly returns of diseases, four times during the year. Sixteen medical men in District No. 9 were requested to become correspondents of the Board; eight in district No. 8; nine in district No. 7.

An average of forty Reports per week recording the prevalence of disease were received from our medical correspondents. These were compiled for the *Weekly Bulletin*, and finally put in a more extended form for the Annual Report.

One thousand one hundred and seventy circulars, with answers contained therein, on School Hygiene, were received and compiled from twenty-one counties.

Three hundred and twelve letters were received, filed and entered in register.

Fifty Reports in reply to the enquiries on sawdust nuisance circular received, and a synopsis made of them.

One hundred and fifteen replies to circular *re* Sanitary Condition of Municipalities were received and tabulated.

The foregoing details may suffice for exemplifying the additional amount of work that has accrued since the new Health Act came into operation, and should it unfortunately happen that during the coming summer this country should have a Cholera visitation a further increase would naturally follow. That such a visitation may not

fairly be considered as an uncalled-for assumption the following grounds may be adduced : Fair reason for believing that the purity of water supply, both in cities and towns, is open to question, and that the prevalence of Typhoid may be viewed as a true index of the risk of this disease ; that we cannot consider ourselves proof against the latter until we have banished the former. Rome, with its pure water supply, has escaped, Paris might probably have been equally free but for a temporary supply of highly polluted water ; while Naples owed its lamentable losses to a soil impregnated with sewage, to its filthy habitations and foul water. Dr. Blaxall, in his report to the Local Government Board for 1882 on Emigration and Immigration, shows that as regards disease prevention, notwithstanding all that has hitherto been done, matters are still unsatisfactory, and that infectious diseases frequently follow in the wake of emigrants from one port to another, and are by them introduced on board ship. With but few exceptions no steps are taken to prevent this latter catastrophe. If the passengers exceed fifty in number they are required to undergo an examination by an officer of the Board of Trade when at the point of leaving the country, but there seems to be no adequate provision for dealing with the case of emigrants coming from the continent to embark in English ships when the infection has declared itself, and until it has declared itself there appears to be nothing to prevent a person mixing with others, and by infected clothing spreading the disease wherever he goes. Dr. Blaxall considers that there is very great need for a better regulation of the passenger traffic, so as to protect the public, the emigrants, and other countries against the spread of infectious diseases. We have then, reason to fear, that unless greater precautions are taken at ports of departure of emigrant ships from Europe to this continent, the germs of the disease not yet extinct may be imported to our shores, and as a necessary consequence a larger amount of additional work by the Board will be called for.

PART I.

CHAPTER I.

THE PUBLIC HEALTH ACT, 1884, AND ITS INFLUENCE UPON SANITARY WORK IN ONTARIO.

As the general public are aware, the scheme which the experience of the Provincial Board of Health, during the first two years of its existence, had proved desirable for the collecting of all sanitary enactments, contained in Provincial Statutes and passed from time to time, as occasion demanded, into one consolidated Act, and for modifying or adding to them what was necessary for effective health work, was carried out by the passing of an Act during the session of the Legislature of 1884, to make further provisions respecting the public health. This Act, which embodies a large proportion of the recommendations which the Board, after much laborious consideration of the needs of the Province, and of the measures which had been taken in Great Britain and elsewhere to supply similar needs, has been such as to supply to the Board a base for operations, the good results of which, even in the short time the Act has been in force, will, it is hoped, be amply illustrated in the pages of this report.

1. *The Uniformity of the Plan for Public Health Work.*—In a work which undertakes to deal with almost every phase of society's existence—with the rearing and education of its children, with the home life, as dependent upon the food and drink, the clothing, the heating and ventilation of houses, the disposal of refuse and excreta, with local sanitation as regards public water supplies, pollution of streams, the regulation of industries which may be injurious to the public health, with the restriction and stamping out of infectious diseases, with healthful methods of public education, and many other equally important problems—it will be apparent that, in so far as is possible, systematic action is necessary, and that this must be dependent upon the adoption of legislation giving a unity and strength to the system. This, it was hoped, and experience has proved it in a large measure true, has been given by the Act. After defining some of the more important terms with which health legislation has to deal, Part I. of this Act defines the ordinary powers, and the special, viz., the powers of the Provincial Board during the prevalence, or threatened prevalence, of *any formidable* epidemic, and the special duties then laid upon local authorities. Part II. of the Act thereafter proceeds to discuss the organization of Local Boards, for the performance of the *ordinary* health duties of every municipality; and Part III. points out very succinctly what these duties are. The methods of procedure on the part of Local Boards, in regard to nuisances and local unsanitary conditions, as respects trades which may be injurious to the health, for establishing systems of public water supply, for dealing with unsound articles of food, to limit infectious diseases, by disinfection, isolation, etc., are all set forth in regular order; while the process by which a Local Board causes obedience to its orders, and the penalty for a violation of the provisions of the Act, are equally well defined. To the Act is appended a schedule in which the details of a comprehensive health by-law, for adoption by municipal councils, are given. From this summary it is apparent, that not only are health matters set forth as a part of municipal work as distinct as is municipal educational work, but, also, that provision is made whereby such special work is to be carried on by a Board, appointed and, presumably, well fitted for its performance. Further, inasmuch as many matters arise of such difficulty as to give Local Boards much

trouble in arranging them, the plan provides for reference to a central authority, with special powers to act in such matters, much in the same manner as the central school authorities have executive relations in connection with the various schools of the Province.

2. *The Principles Underlying the Plan.*—We think that all will be inclined to go at least as far as a modern writer of very democratic tendencies, Henry George, on the Province of Government, when he says:—"Government should be repressive no further than is necessary to secure liberty, by protecting the equal rights of each from aggression on the part of others." A careful study of the provisions of the Act must make it appear evident that, if this point in health legislation has been reached, it certainly has not been exceeded. It has been common to say that *health laws are always tyrannical*; but, from a sociological standpoint, the provisions of this Act are tyrannical only towards the offenders against the rights of others. It is based upon the axiom, "that it is the business of Government to do for the mass of individuals those things which cannot be done, or cannot be so well done, by individual action." This will be seen by examining any single provision of the Act. Take, for instance, the first executive provision relating to Local Boards: "It shall be the duty of every Local Board of Health to cause to be made, from time to time, inspection of its district, in order to prevent the accumulation within the district of any dirt, filth, or other thing which may endanger the public health." Were every citizen capable and willing to prevent such accumulations, it would become unnecessary for any such regulation; but it is a fact, patent to all, that in many cases people are not willing to take the trouble to prevent them; and further, it is readily seen that scavenging, for instance, can be better and much more economically done under municipal management, than by individual citizens. But following the bearing of this provision for protecting the public health a little further, we will see how widespread is its application. Such accumulations as house refuse, refuse from tanneries, piggeries, etc., become offensive from an æsthetic standpoint; they pollute public water supplies, and are the materials favouring the propagation, of epidemic disease; and, finally, they affect the rights of others by depreciating, in the case of offensive trades, the value of property.

Any other provision of the Act may, it is confidently asserted, be defended on the same ground as the foregoing. Regarding the plan as already outlined, whereby authority, starting with the municipal government, passes by degrees, according to the difficulties or magnitude of the case, to the general government, it has been made apparent that distinctive work is set apart for each, from the individual citizen, the municipal board, the government board, up to the Government itself. The good to the individual and the state, through the preservation of health and life, is mutual, and the work for the attainment of this end must be general and common to both.

3. *Some of the more Important Provisions of the Act*—Of the provisions of the Act, there is one of extensive importance from a public health standpoint, viz., the one already referred to, by which the Provincial Board of Health, subject to the approval of the Lieutenant-Governor, may issue regulations for the prevention, as far as possible, or the investigation of disease. Such a power, granted formerly to a Central Board by proclamation of the Lieutenant-Governor, but seldom resorted to owing to the depressing effects of such proclamations upon trade and public sentiment, is now a part of the routine work of the Provincial Board; and during the past summer it was acted upon to the extent deemed equal to the degree of danger of Cholera being introduced through some Canadian or American port. All parts of the country, instead of being alarmed, were reassured as to the public safety, and felt that the Government was prepared to act against anything greatly menacing the public health. The response to the action of the Provincial Board at that time was, from all important centres of population, prompt and largely satisfactory; but in this particular, it is necessary for all to remember that the public danger is not past, and that increased energy of local action is still imperative, before the country can feel itself prepared to cope with the outbreak of such a disease should it occur during the coming year. In connection with outbreaks of diseases, such as Cholera, just referred to, or, what will occur much more frequently, of Diphtheria and Typhoid Fever, Section 11 of the Act contains an important provision, by which the Board is authorized to send its "Secretary or any member or members of the Board, to

investigate the cause or causes of any contagious, or other disease or mortality." This provision, which is also contained in the Act establishing a Provincial Board, has been exercised on a goodly number of occasions, and in all cases much information and good has been the result: but owing to the limited opportunities and time of the officers of the Board, and their inability to follow up the investigations by personal assurances that sanitary remedies suggested have been carried out in a thorough and systematic manner, this branch of the work, to which is attached the opportunity for organizing the Local Boards for better work, has not attained that position which, in the view of the Board, its importance deserves.

One of the various clauses of Part II. viz., Section 12, contains provisions which are a great step in advance of previous legislation. The compulsory formation of Local Boards was a *desideratum*, the attainment of which has enabled the Provincial Board to push local sanitation to a degree hitherto quite impossible. Its progress will be referred to at length in Chapter II.

The first clause under Part III., by which the work of the Local Boards is left entirely at the mercy of the Municipal Council, by virtue of the latter voting or not voting such sums of money as the Local Board may deem necessary for carrying on its work, has, as was expected, been a great hindrance to local work. Various and numerous instances have occurred where councils have absolutely refused to advance any money for health purposes to Local Boards. Probably the most glaring abuse of power in this regard, on the part of Municipal Councils, has been in the capital of the Province, where the total amount of money actually at the command of the Board was \$500 for the sanitary needs of a population of nearly 100,000! Such facts point to the necessity for such a change as will enable Boards to be supplied with sufficient funds for carrying on their work, accompanied with, as a consequence, a direct responsibility to the ratepayers for its proper use, as is the case with the School Boards. Assuming, however, as in some instances is the case, that Boards have been authorized to engage in executive work, with the assurance that any expenses incurred will be borne by the Council, we find in Section 23 power given Boards to order, and see that the ratepayers carry out such necessary health work as is required of them. Sections 26 and 27 define the manner by which such performance can be enforced. Section 28, etc., indicate clearly the work which the Boards are expected to perform, such as the abatement of nuisances, or such unsanitary conditions as may endanger the public health, whether within their own or contiguous municipalities. As many cases are likely to arise, and have arisen within the year, of much difficulty, owing to the various opinions which may be held as to how they should be remedied, and because they would affect important interests, Secs. 36, etc., provide that local authorities may apply to the Provincial Board to investigate these matters, and lend their experience and influence to having them equitably settled. As will be seen in subsequent chapters, the work thus thrown upon the Provincial Board is often of the most difficult and intricate character, calling for, on their part, much minute investigation and consideration of how best to advance the public health with, at the same time, the greatest regard for private rights and vested interests.

Sections 38, 39, 40, deal with the important duties of Local Boards in securing good water and good food, and for adopting sanitary methods for the disposal of excreta and house and barn refuse. Sections 41, etc., provide for the restriction of infectious diseases on the part of Local Boards and their Medical Health officers, by requiring householders and medical men in attendance on such cases to report their existence to the Board, who are expected to have provided medical men with blank forms for reporting. This, we are happy to say, has been inaugurated and is being carried out in many municipalities. Municipalities under these sections are also required to provide hospitals for the reception of persons affected, whose conditions are likely to make them sources of public danger through spreading the disease. Provision is further made for the disinfection of infected clothing, and the protection of the public against infection from travelling in vehicles by heavy penalties imposed upon those who remove or sell infected clothing or other articles, or who shall knowingly carry infected persons in carriages, etc. Sections 65, etc., contain the penalties which are to be inflicted for neglect or violation of the provisions of the Act. Such are the general provisions of the Act. Based on this is

Schedule A appended to it, and which, unless altered or repealed, becomes the by-law of every municipality. The clauses of the by-law are most comprehensive, and have in but few instances been materially amended by municipalities; and the Board feels that where local authorities see that the provisions of the by-law are carried out there will be little to be desired in the conditions of the local health. Action under many of the clauses has, in numerous instances, been taken, and it is believed that the various subjects referred to in them will gradually come under the attention of Local Boards.

4. *Comparison of the Results with those of Last Year.*—Section 13 of the Act provides that the appointment of Local Boards under the new Act take place at the first meeting of the Municipal Council in May, and that Schedule A, unless amended or repealed, becomes municipal law after the first day of July, 1884. It thus appears that the operation of the Act has not been for a greater period than six months. With so short a period for the working of the Act it would be as manifestly unfair to expect too much as it would be to dilate too largely on the good results attained. We may, nevertheless, indicate some of the points wherein this Board and its associated Local Boards stand in much improved positions respecting their ability to get sanitary work accomplished. Instead of the Provincial Board being now able, as previously, to only point out to Municipal Councils the desirability of their appointing Local Boards they can now refer them to the clause of the Act requiring them to appoint Local Boards, and also to Section 19, informing them of the powers of the Provincial Board to appoint Local Boards in case of their neglect. As will be seen in Cap. II., the effect of this clause has been to have more than six times as many Local Boards in existence to-day as a year ago. But this point, as will have been gathered from the review of the provisions of the Act, is followed up by clearly defined methods of procedure on the part of Local Boards, which formerly had been a great obstacle to effective work. Reference to the Provincial Board, in cases of difficulty, is now perfectly understood, and the latter has now certain well-defined executive powers, which make the facilities for seeing that real work is done in the municipalities, many and real. Before the Act it was impossible for the Provincial Board to obtain any accurate information of the local condition of health work. Now, as will be seen subsequently, Annual Reports are received from Local Boards in all parts of the Province, and a fair index of progress is thus obtained. Local authorities, now aware of their powers, have in a number of cases prosecuted under clauses of the Act, and the reading of the law has been so clear that verdicts against offenders have been obtained and remedies have been effected. Previously the method of procedure was uncertain, and conviction was difficult of attainment. Last year any local sewage or water supply schemes instituted were carried out without any reference to the Provincial Board. Now the method is easy by which local authorities can refer their schemes to it and obtain suggestions which are likely to make improvements in defective schemes. Last year, although under the Act of 1882, the reporting of infectious disease was made compulsory, yet the anomaly existed of there being in most cases no board by whom information would be received. Finally, the process has been made easy by which the Provincial Board can establish a complete system for receiving information, giving instructions, and seeing that they are carried out during periods of extended invasions of infectious diseases. If much remains to be accomplished, it is nevertheless true that much has been gained, and that the new Health Act has given an impetus to public health, which, under old conditions, would have never been possible.

5. *Comparison of the Plan with Other American Systems.*—In Cap. VII. of the Second Annual Report of the Board, a somewhat extended comparison was made of the defect in Ontario Health Legislation, by a comparison with two of the most complete existing systems, viz., that of Great Britain and that of the State of New York. In the latter the formation of Local Boards, under an Act of 1881, was made compulsory, and these Boards were to be triennial. Such is the law also in England, with regard to the number of Local Government District Boards. In the former most of the members hold office, *ex-officio*, being the Mayor, Clerk and Justices of the Peace, with a citizen member appointed by them; in the latter the members are elected by the rate-payers, and have the power of levying assessments for health purposes. In New York it

is the duty of the Council to provide funds for the operations of the Boards. In two respects it must be conceded that the Act of 1884 falls short of both of those mentioned in two particulars, viz., that the members of Boards in both cases hold office for three years, and that in both, power for obtaining funds are given, notably that of England.

Experience has already proved that, in Ontario, effective work will depend on some such amendments being made to the Act of 1884. Excepting these two examples, Ontario has nothing to fear by a comparison of her Health Act with that of any American State. Michigan has an old and, in many ways, a very active State health organization, but the powers of the State Board in regard to local health matters are (New York 1882 Report) apparently of a wholly advisory character, while the old difficulty regarding executive action apparently exists there, of the Local Board being simply the municipal council, (or a committee of it), and that the expenses of any health work performed by them, are defrayed from township funds. The evils of this method, in practice, were referred to fully in Cap. VII., Report of 1883, and the advantages of the English and the New York systems were also pointed out. From the principles underlying the Michigan State Board organization, as enunciated by the Secretary, Dr. H. B. Baker, in a paper read before the American Social Science Association in 1882, it would appear that the Board has no power to deal directly with the question of preventing the introduction of contagious diseases, or for exercising administrative powers for suppressing them when introduced. In Illinois there is an entirely different system in existence since the Secretary of the State Board acts practically as a State Commissioner of Health. He has very extended administrative functions, not by any means confined to sanitary matters, since he is likewise the chief functionary for regulating the practice of medicine in the State. He has power to prevent the entrance, even into the State, of vessels or railway trains suspected of, or actually conveying persons having infectious diseases. The work of local organization does not, however, seem to have been advanced to the same extent as in Michigan. The State Boards of eastern States have, in most cases, other than sanitary powers attached to them. That of New Jersey has a secretary whose work also deals with epidemic diseases of animals. Local sanitary work is conducted on the permissive plan of Committees of the Council being Officers of Health. The New Hampshire Board is constituted on much the same plan, but has, in addition, control of registration of births, marriages and deaths. This is similarly true of the New York, Rhode Island and Connecticut Boards. In the two latter sanitary work, on the part of the State Board, is mostly of an advisory character, and occupied with carrying out investigations into out-breaks of epidemic disease. The Massachusetts State Board, which in past years has given the greatest impetus to State medicine of any organization in the United States, undertook and carried out for ten years sanitary reforms, with a thoroughness allied in some degree to that which obtains in Great Britain; but through the political changes incident to the American system, it underwent a metamorphosis, and has lost most of its old efficiency by being merged into the Board of Health, Lunacy and Charity. From this brief review of the more notable of the American Health Organizations, it will appear that the Ontario Sanitary Code, will compare favourably with that of any State, and with one or two exceptions, it is superior, in its having succeeded in intimately associating the Provincial with the Local Health organizations; and, while its relations with the latter are largely of an advisory character, yet there are circumstances in which the Provincial Board may step in and strengthen the hands of Local Boards, or, in some cases, protect the local health, should municipal authorities prove neglectful of their onerous duties. Regarding its protective powers over the Province at large, against dangers from the introduction of infectious disease, its powers are, as they should be, extensive, and in many matters with the sanction of the Lieutenant-Governor, absolute.

CHAPTER II.

MUNICIPAL HEALTH WORK UNDER THE NEW ACT.

1. *Work of Local Health Organization.*—In referring to the work done by Local Boards of Health since the passage of the Public Health Act, 1884, which became the law of the Province on the 1st of May, 1884, it must be borne in mind that it took some time for the various municipalities of the Province to be made aware of the existence of such an Act. Copies of the Act were forwarded to all the clerks of townships, villages, towns and cities in Ontario, accompanied by a circular calling their attention to the provisions contained in it and the advisability of at once bringing the question of the formation of Local Boards of Health before their respective Councils. A large number of municipalities cordially responded to this call, and in a short time the Provincial Board had the pleasure of receiving intelligence of Local Boards being formed in all directions. It is true that some were apathetic in the work, while others have not yet taken advantage of the powers conferred on Municipal Councils by the Public Health Act, and for some cause or pretext have not yet established Local Health Organizations. This, of course, is a violation of the provisions of the Act and the delinquent Municipal Councils have been made aware of this fact by circular, and many of them by private letter, urging them to comply with said provisions and form Local Health Boards at once. In reply, some letters have been received from clerks stating that owing to the good sanitary condition of their respective districts, and the excellent health of the inhabitants, their Councils did not think it necessary to go through the form of appointing Local Boards. This excuse was met by the Secretary, who explained that, in the first place it was their duty to obey the law, and that although good health and sanitary conditions are now happily in existence amongst them, yet it is well to be always on the watch, since some insidious disease might at any moment break out, and, finding them unprepared with organized methods for combating it, would destroy many valuable lives which might be saved to the community by the wise exercise of those precautionary measures which are taken by all active health organizations. From the many letters promising strict conformity with the Act at an early date, which have been lately received, it is confidently anticipated that in the early part of 1885, all those municipalities whose Councils have not yet appointed Boards, will fall into line with those who have already taken advantage of the salutary provisions of the Public Health Act for the formation of Local Health Organizations.

The work which has been performed by many of the Local Health Boards now established has been very onerous and singularly well carried out. Their officers have evinced a most creditable interest in the prosecution of needed sanitary reforms, and have, in many instances, shown a wide knowledge of the meaning of the Act; whilst a few who were not quite sure of the bearing of some of its clauses, have written for information to the Secretary of this Board. When we consider the short time—only a few months—since the Act was passed, it is a subject for congratulation to know the amount of good work performed, and the preventive measures taken for lessening disease by the Local Boards of Health now established throughout the Province.

2. *Reports of Local Sanitary Conditions.*—The Secretary has received 221 Annual Reports from Clerks of various Municipalities in the Province, the great majority of whom state that their districts are in a comparatively good sanitary condition. Very many nuisances were in existence before the Local Boards were formed, which have since been removed and steps taken to prevent their recurrence. In a few municipalities, Diphtheria, Small-pox and Typhoid made their appearance, but owing to the prompt action of the local health authorities, especially where there are Medical Health Officers, these diseases were isolated and prevented from spreading. This in itself shows the great necessity there is

for Local Health Boards being formed, as the concentrated and prompt action of these members can prevent an epidemic of disease; whereas in those places where no such Boards exist, panic is the result when epidemic disease makes its appearance, the people not knowing how to act together so as to render effective service to the sufferers, and to keep the disease within existing limits. Too late it may strike the council of such municipalities that they have been somewhat remiss in their duties. It has frequently happened that the council has then taken action and formed a Board which, properly organized, has been able to effect great good; but how much better it would have been had such a Board been formed before the visitation of disease. The recent outbreak of Small-pox in Hungerford will amply illustrate this remark: Here as in many other cases the feeling previous to the outbreak was that owing to the health of the people being so good it was unnecessary to form a Local Board. When Small-pox made its appearance, no preparations having been made to resist and conquer it, it spread rapidly, until in a very short time sad havoc was made amongst the people. At the very outset a panic ensued, as a natural result of the absence of a health organization, and the Provincial Board of Health had to step in and endeavour to remedy evils due to the neglect of the local authorities; and by its unremitting efforts in having a Local Board of Health appointed, vaccination and re-vaccination practised, inspectors and constables detailed to secure isolation, the disease was practically eradicated from the township, but only after the loss of many lives.

On the other hand, numerous instances might be given to show the good results of careful and systematic looking after the sanitary conditions of districts presided over by Local Health Boards; but space being limited we have only to say, that of the many reports received by the Secretary of this Board from Local Boards of Health throughout the Province, regarding the sanitary conditions of their respective districts, a large majority of them show that sanitation is receiving great attention at the hands of Local Health authorities. They now realize that an unsanitary condition begets disease, and they appear to be determined to do their utmost to eradicate the cause of so much sorrow, misery and expense to the inhabitants.

3. *Progress of Local Sanitary Improvement.*—Prior to the passage of the Public Health Act, 1884, there were few properly so-called Local Boards of Health in Ontario. True, there were Committees of Councils appointed in a few places to look after the public health, but as there was really no scientific method determined on or carried out for the prevention or treatment of disease, whether of an endemic or epidemic character, nor any sanitary by-law thoroughly enforced, the government saw the necessity of legislation on the subject, and hence the Act, which came into force on the 1st of May, 1884. Over 400 Local Boards of Health have been formed in the Province since that time, or more particularly since the 1st of June—because a month at least elapsed before the different municipalities became cognizant of the provisions of the Act, and they could not move in the matter sooner. That is to say, in the short space of seven months, nearly two-thirds of all the municipalities have conformed with the law, and three-fourths of the people are under sanitary supervision, and from the reports of sanitary conditions received from the secretaries of Local Boards, it is at once seen how rapidly progressive is the work done in a large majority of cases. House to house visitations have been made by the officers of the Boards, and when anything in the form of a nuisance has been seen, steps have been at once taken to have it either abated or removed, according to its character. In many municipalities slaughter-houses have been visited and if they have been found to be in such a condition as to be injurious to the public health, their owners were forthwith served with notices to have the nuisance at once attended to. Proper systems of drainage have received much consideration at the hands of Local Health authorities. The wells attached to the dwellings in some municipalities, where at present there is no water works system, have received a share of the special notice of Boards, and when situated in dangerous proximity to out-houses, from which they were liable to be contaminated, measures have been taken to prevent this by having the wells closed and new ones dug in positions where such contamination would not be possible. Where this has been done the results must necessarily have been most favourable to the health of those having to use the water. It is a well-known fact that impure water is the cause of many diseases of a

serious nature. Whilst, however, it is our pleasureable duty to bear testimony to the many praiseworthy and effective efforts made by Local Boards of Health in various municipalities, we regret exceedingly that in others there has been a great want of attention to this as well as other matters, and bad, unwholesome water, with nuisances of a domestic as well as of a public character, are still to be met with even in municipalities where there are Local Health Boards. This state of affairs should not be allowed to exist, if a desire to save health and life actuates those having charge of both. There is another point which deserves notice and it is, that in municipalities where there are Medical Health Officers and Sanitary Inspectors in connection with the Local Boards of Health, a much greater improvement is perceptible. We are sorry, however, to have to record the fact, that of those 400 Local Boards of Health formed throughout the Province, only 65 have Medical Health Officers, and 96 have Sanitary Inspectors. The great apparent cause of this state of affairs is the *expense* of such appointments. Officers in such positions cannot be expected to work for nothing, nor to give their valuable time and run many risks of taking disease without being recompensed for their labour. But it looks as if some municipal councils think more of a few dollars than of the lives of the inhabitants, and as if they imagine that by saving expenses for the time—and only for the time—a great favour is being conferred on the ratepayers in lessening by so much the amount of their taxes. The very fact of its being demonstrated that where these officers are appointed an amount of sanitary work has been performed creditable in the extreme, ought to be sufficient incentive to councils who have not made such appointments to do so at once, and they will in a very short time reap the advantage of adopting a course at once beneficial and, in the end, highly economical to the inhabitants. Notwithstanding this oversight on the part of a large number of municipalities, we cannot but feel much rejoiced at the very marked improvement which has taken place in sanitary matters since the passing of the Public Health Act, 1884. The question of sanitary reform is taking a strong hold not only of Local Boards of Health, but also of the inhabitants, whose co-operation with the Boards will cause the powers of the latter under the Act to be more effective in future, and the benefits conferred by sanitary science properly applied by them, will be cause for heart-felt congratulations of the people.

4. *Local Sanitary Needs, and Suggestions for Further Improvement of Local Health Work.*—There are a number of needs which experience has shown to be imperative, if local Health Organizations are to perform effective work.

(a) *The Appointment of Sanitary Officers.*—Section 20, Public Health Act, 1884, gives the Municipal Council power to appoint a Medical Health Officer and Sanitary Inspector or Inspectors. This is the first essential to active sanitary work. The necessity for a Medical Health Officer is due to the fact, that sanitary work is evidently a scientific work, dependent upon a knowledge of a class of facts which medical men from their profession are more likely than others to possess. Knowing in a larger degree than others the causes of disease, they are most likely to suggest the readiest and most practical ways for carrying out public health work. From their daily practice and rounds in various communities, they are most conversant with sanitary conditions and needs. They are the first to detect epidemic disease, and hence are in the best position to advise Local Boards of the necessity for immediate action, and to indicate the direction in which their energies are to be exerted. This being the case it would naturally follow, as it actually does, that they are in most instances the first persons to agitate for sanitary reform. Very many of the Boards formed have medical men as members, while, as already mentioned, some sixty-five Medical Health Officers were appointed in 1884. But, while the strength of a Board is greatly augmented by the presence in it of a medical practitioner, it is readily understood that his many other duties, as well as feelings of delicacy, make it unlikely that he will be as active in the public service, as if he were the regularly appointed Medical Health Officer. He is, if legally appointed Medical Health Officer by the Council, placed in a position in which, by virtue of his office, much power and extensive duties are assigned to him. This being the case, it is natural that the Council in looking for the performance of such duties, should fix upon some remuneration for services rendered. In some cases this has been done, while in others medical men have acted in

the public interest without pay from philanthropic motives, and for the sake of having their own districts stand favourably in the eyes of the public; since nothing can be more certain than the fact, that *good public health* has an actual financial value in the market. But, inasmuch as this latter method lacks in those business qualities essential to any well-executed work, it seems desirable that some means be adopted by which Medical Health Officers should be appointed under compulsion, and that some *per capita* basis be established for their payment. Whatever doubt there may be concerning the expediency of this under the ordinary conditions of the health of the Province, there can be none under the exceptional conditions of the presence of contagious disease of epidemic prevalence. If it be not thought desirable that a clause should be inserted in the Act, making it compulsory on all Municipal Councils to provide for the appointment of a Medical Health Officer, there can be no difference of opinion regarding the desirability of giving to the Provincial Board, with the sanction of the Minister of the Department, the power of saying where such a duty shall be imposed upon a Municipal Council, and of stating, when required, what the rate of remuneration of the Medical Health Officer should be.

The appointment of Sanitary Inspectors can be considered only second in importance to Medical Health Officers. It is quite obvious that no sanitary system, however well it may be planned, will be of practical service unless its provisions are carried out; and there must be some person to carry into execution the orders of the Medical Health Officer, and the provisions of the sanitary Acts and By-laws. Such executive works it should be the duty of the Sanitary Inspector to perform, as well as to see what abuses or unsanitary conditions exist and report them to the Medical Health Officer when necessary. His work to be effective must be constant, unremitting and systematic. His is a work which, bringing him often into antagonism with individual ignorance, personal neglect, and private interests, must of necessity here and there initiate and create a hostility toward him personally, as the officer is too frequently confounded with the office; hence, requiring tact, intelligence and character, the work ought never to be delegated to any person not possessing these qualities, and anyone possessing them deserves and will require to be properly paid.

(b) *An Annual Grant for Sanitary Work.*—Doubtless this is the pre-requisite of all effective health work. War cannot long be waged without the sinews of war. It would seem idle in some instances, as those of new, sparsely-settled and poor townships, to expect much to be done in this direction, when we are told that school and other expenses already make the taxation which would be required, more than two cents in the dollar on the assessed value of property. Dire necessity, as in the case of Small-pox and Cholera, could alone make this possible; but, fortunately, the very sparseness of population makes the necessity less. In the vast majority of municipalities, however, this will not prevail; and it will simply require the steady advance of intelligence, teaching that appropriations for public health work are a wise economy, in order to have the grant made annually with as much regularity as it is made for school purposes. Regarding such grants in cases of emergency, experience during the past year has taught the necessity for having an amendment to the Health Act, by which adequate machinery shall be provided for the enforcement of certain existing clauses of the Act, requiring municipal corporations to supply necessary funds for limiting or suppressing epidemics.

When officers and funds approaching the amount necessary for effective work, have been supplied to Local Boards we may fairly expect to find the many other manifest needs supplied in proportion. Some of these have been time and again pointed out.

(c) The Sanitary Inspector or Inspectors should make a systematic and thorough examination of the district, on some such plan as that set forth by the Provincial Board in the Inspector's book, a copy of which was supplied to each municipality during the year. Such inspections having been made, the remedying of unsanitary conditions found existing would follow his directions, if not voluntarily then they would be insisted on by using the coercive powers of the Act.

(d) Among the most urgent needs in most, if not all, large municipalities is the passage and enforcement of a by-law providing that the plans of all buildings about to be erected, be referred to the Board or its officers in order that no unsanitary conditions be

permitted. This, which seems at first a somewhat harsh measure, can in no sense be considered so, when it is remembered that the municipality insists on it for the protection of any of its citizens who may occupy such buildings. If it be asserted that often the builder is not to be the occupant, then in the name of all that is just and decent, the builder should be just as willing to protect tenants as himself, and should be compelled to do so. It is intolerable to think that the poor, who are unable to erect houses of their own, and who are often forced to remain in houses in a disgraceful sanitary condition, because they do not know where to find better, or are unable even to obtain funds for the necessary moving from place to place, should be left, as at present, absolutely helpless in this matter. The inspection of the house in course of erection follows as a necessary corollary to such a law, and there is no hardship to the owner involved in the matter.

(e) The last to be mentioned, while leaving many other important matters untouched, are the needs for some more organized methods for the removal of excreta. In season and out of season, this has been asserted by this Board, and while acknowledging that there are difficulties in the way, we must again repeat that these difficulties will rapidly disappear by systematic and methodical modes of dealing with them, such as have been recommended in the pamphlet, No. 11, published by this Board. The day is past for box drains, and drains pretending to be sewers, which in more than one town and village in Canada have been found to *run up-hill*, as also for the filthy collections which too commonly exist in our back yards.

CHAPTER III.

ACTION TAKEN REGARDING VARIOUS PUBLIC NUISANCES AND LOCAL
UNSANITARY CONDITIONS, WITH RESULTS.

Although it may be difficult to give a definition of a nuisance, which shall be sufficient for all circumstances, the fact nevertheless remains that nuisances do positively exist, even as cases of insanity do, though experience has shown that there is no sufficient definition for the latter, except that it is the opposite of sanity. Chapter V. of the Second Annual Report contains what is believed to be as comprehensive a definition as it is possible to give, viz.: "A nuisance is anything which is injurious to health, or which is materially offensive to the senses, or which interferes with the enjoyment of life and property."

Experience in several cases before the courts, even within the present year, has shown how difficult it is to decide not only whether this or that condition is *injurious to the public health*, but whether it is even *materially offensive to the senses*, or *interferes with the enjoyment of life and property*.

There are very many reasons why there should be, if possible, some definite scientific meaning accepted for the term *nuisance*, which would be received without cavil by the courts, since we are persuaded that in them can never be properly settled by ill-informed though honest witnesses, or by interested or prejudiced witnesses (of whom equally great numbers can be found by both the prosecution and defence), questions which depend upon incontrovertible scientific facts, which facts are not altered one iota by all the witnesses in the world. It is perfectly manifest both from reason and experience that the senses are not to be relied upon in determining whether or not a thing is a nuisance, and yet such evidence is that which is likely to have more weight in a trial before an ordinary jury than would scientific evidence. It is well known that the senses become blunted or active in proportion not only to the degree in which they are used, but also to the nervous organization of the person using them. From a person who lives in the air of a slaughter-house to that of the savage who is known to follow a trail, guided by the sense of smell, there are an infinite number of degrees in the acuteness of that sense. Yet, in a court of law, the word of the one is neutralized by that of the other, should both be capable of testifying. Arrange between these two the mass of the people of an ordinary community, and somewhere between these we are supposed to have arrived at the normal degree of acuteness, which is to decide whether a smell is or is not materially offensive to the senses. That such can be no criterion is evidenced by the fact that those living daily under the influence of the odors from effluvium nuisances, are often found to say that they experience no disagreeable effects therefrom, though others of more delicate and sensitive organizations are rendered ill by exposure to them.

Another unfortunate circumstance in dealing with these matters before a jury is that the condition of the offending manufactory or premises at the time of trial is too often allowed to enter into the question, and, as has occurred recently, a jury is allowed to inspect premises, and on such grounds decide whether a nuisance exists or not. It may be that at such a time care will have been taken to abate the nuisance to such a degree that the condition cannot be taken as a fair sample of what is ordinarily to be found. It is plain that such methods are most imperfect, and it cannot be too strongly pointed out that certain definite and fixed principles based on scientific data should be laid down for dealing with such cases. To make the question of whether a man with senses rendered obtuse is or is not nauseated by a smell a criterion of the existence or absence of a nuisance is as crude as was trial by fire in old Saxon times, since the guilt or innocence of the accused was tested by his power to endure pain.

1. *Nature of the Nuisances.*—As may be naturally expected, the nuisances to be dealt with from one year to another will be somewhat similar in character; yet certain differences

will be found in some of the cases which have come under the notice of the Board this year. The principal sources of nuisances or unsanitary conditions to be briefly noticed are :

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|-----------------------|---------------------------------|
| 1. Cheese factories. | 6. Artificial manure factories. |
| 2. Slaughter houses. | 7. Mill-dams. |
| 3. Cattle byres. | 8. Sewage pollution of water. |
| 4. Woollen factories. | 9. Cemeteries. |
| 5. Privies. | 10. Sawdust. |

In various ways the air or the water or both have been polluted, and we will first make a few remarks regarding air pollution, or effluvium nuisances.

In keeping with the remarks introductory to this chapter, it is not surprising to find that effluvium nuisances, or such as are disagreeable to the sense of smell, are those against which municipal health authorities usually first proceed. What is generally demanded by the people is that the disagreeable smells be abated. The gases of decomposition in this class of nuisances produce nauseating and depressing effects, and at times serious results follow. They mostly come, therefore, within the latter part of the definition, interfering as they do with the enjoyment of life and property. Modern biological research has shown, moreover, that there are dangers more serious by far than those dependent merely upon gases of decomposition in connection with effluvium nuisances. Microscopic forms of life in infinite number may be borne on the air with the ascending gases, and finding a lodgment on the mucous membranes of the mouth and air passages, become the source of serious disease. Allied to this fact as a cause is another element of danger, due to these fermentative processes. Not only are there such emanations as sulphur and ammonium compounds borne on the air, but, from the worst forms of animal decomposition, the air seems laden also with volatile animal odours whose chemical constitution is at present imperfectly determined. These seem to act either by directly poisoning the blood of a sickly person exposed to them, or by supplying new food to the microbes flourishing in the blood, in either case producing, as experience has abundantly proven, more aggravated forms of disease than where the person is in a fresh and pure atmosphere. The same thing is seen in the hospital gangrene and other forms of septicaemia in ill-ventilated and ill-kept hospitals. In addition, however, to the offensive character of these nuisances there are other dangers attaching to them, which are disregarded because not sensibly felt by the general public, and which are due to the microbes of special diseases which find, there is reason to believe, special opportunities for their development where effluvium-producing organic materials abound. Illustrations of this are to be found in connection with Charbon, Diphtheria, Typhoid, and probably also other zymotic diseases.

With the increase of population many questions of health arise, which in earlier days seemed to have no special importance. Amongst such questions in Ontario is that of the pollution of water with organic matters.

Organic pollution is of two kinds, animal and vegetable. In Ontario vegetable pollution has been that which, owing to the large amount of forest, and the disposal of the products of saw-mills and streams, has up to the present produced the most serious results, and has led to special legislation for protecting rivers and streams from pollution by such causes. This has been done wholly in the interest of the fisheries, but there is strong presumptive evidence that serious effects upon health have resulted from the collection of sawdust and other vegetable refuse along the shores of streams and mill ponds. Whilst the effects from sawdust may grow yearly less owing to the destruction of timber, the collections of organic matters, either animal or vegetable, in mill-ponds, but especially the former, increase with a growing population in villages and towns along the streams.

1. *Cheese Factories.*—Several instances have occurred where Local Boards have been induced to take action against the owners of cheese factories for creating nuisances. Last year a complaint against a cheese factory showed the nuisance to be due to allowing the refuse whey to flow along the gutter of a village street. Containing albuminous matter, its decomposition creates a nuisance of a very pronounced character. In the case of a factory at Thamesville, the Local Board notified the tenant and also the owner to abate the nuisance, pronouncing it to be such in the following words:—"The foul stench is

unbearable and can be felt in many parts of the village, and must be abated." The tenant positively refused, and the owner failed to take any action. Upon this, the Local Board, with a praiseworthy energy, determined to effectually deal with the matter, by having the "health inspector lock up the premises and stop all work, appoint men to properly clean and disinfect the premises, and then refuse permission to allow the factory to run till all expenses incurred are paid." On communication with the Provincial Board, the local authorities were advised that the regular method of procedure under the Act was under section 35, whereby the manufacturer is liable to a penalty of \$10 a day for every day on which, after notice by the Local Board, the offence is continued, and that sections 25, 26 and 27 indicate plainly the methods of enforcing the fines. This class of nuisance has been dealt with by other Boards, who have compelled the storage or removal of the whey in such manner as will keep it from creating a nuisance. That such manufactories tend to become unwholesome to those operating them, is made apparent from the reports of Dr. McNaughton (Medical Health Officer of Erin Township) and others.

2. *Slaughter-houses.*—Local Boards throughout the Province have, during the year, been much occupied with the nuisances arising from slaughter-houses. These are present in almost every village, and in every town and city, and they afford typical examples of effluvium nuisances; and, from their disagreeable odours, they are especially calculated to induce municipal action. In many instances, as will be seen in the annual reports of Local Boards, the provision of the municipal by-law, requiring slaughter-houses to be at least 200 yards from any house, have either been carried into effect, or such precautions have been insisted upon as to greatly limit the nuisance arising from them. These precautions were fully described in the last annual report of this Board. Instances where the Provincial Board has been referred to for advice are numerous, some of the more notable being those at the International Bridge and Richmond Hill. In the latter case the Local Board has shown but little regard for the public weal, if we are to judge from the inactivity displayed by it in the face of continued complaints.

The fat-rendering and bone-boiling establishments, dealt with in last year's report, have been again under notice this year. In those in the vicinity of Toronto, by the adoption of improved methods, the nuisance has been considerably lessened, while those of one or two other places are gradually being limited in their operations.

3. *Cattle-byres.*—This year has been marked by a celebrated trial, an action having been taken in the Chancery Division of the High Court of Justice by certain residents and property-owners, in the name of the Attorney-General, to restrain the nuisance caused by the cattle-byres of the Gooderham & Worts Company, Toronto.

The details of the nuisance and of the management of the byres are given in a report adopted by this Board, and published in the second annual report (pp. 231-233). These details were fully substantiated by evidence given at the trial. Many witnesses testified as to the foulness of the waters of Brown's Pond and Ashbridge's Bay, and as to the offensive nature of the effluvia. Many bore witness to the fact that sickness and general *malaise* had been produced by these causes; also that in times of illness windows had to be kept closed on account of the offensive smells.

In addition it was proved that the ice dealers had suffered pecuniary loss, and that much of the ice cut in Ashbridge's Bay is unfit for use. One of the counsel for the defence endeavoured to shake the witnesses on this point by appealing to their self-interest, causing them to reflect that by testifying thus they were injuring their own business; but these appeals failed of their effect, the witnesses did not swerve from their statements regarding the impurity of the ice. Some witnesses were also of opinion that the more valuable kinds of fish had been driven away by the sewage contamination. During the trial the premises were visited by the Hon. Mr. Justice Proudfoot, the presiding judge.

The plaintiffs' case occupied a week, and at the end of that time overtures were made by the defendants, and the result was the agreement which will be found recorded, as the judgment of the court, in a subsequent part of this Report. This agreement was accepted by the plaintiffs without expert advice on their part. The case promised to be a very lengthy one, especially if carried to the Supreme Court or Privy Council, as it was said would be done, and the plaintiffs had not the wherewithal to stake in the further conduct

of the case. And so the little trees have been planted, the spouts and trestle work removed, and the cost paid, but the effluvium nuisance remains, and the water is still polluted.

Besides the now famous Gooderham and Worts case, other nuisances of the same character have within the year come under the notice of the Provincial Board. One of these will be referred to in the report on the pollution of the Waterloo creek, from the drainage of a distillery running into it. The cause of the nuisance being exactly the same as that of the case just mentioned, further reference to it is not necessary.

The dairies connected with drains have in a number of instances been the subject of municipal supervision during the year. This has noticeably been the case in Toronto, but the policy of the corporation of this city in connection with the matter has been rather vacillating and inconsistent. The dangers to which the public are exposed from impure milk and from milk supplied from unclean establishments, have been frequently dilated upon in these reports, and are again referred to in the report of the Committee on Epidemics, to be found in a later part of this Report.

4. *Woollen Factories.*—Several instances of nuisances from this source have been referred to this Board. One of these is that of the Waterloo Woollen Factory, which was complained of by the Local Board of Waterloo township, as polluting the Waterloo creek which feeds a large mill-pond at Bridgeport on the Grand River, some three miles below Waterloo Village. The matter being one of difficulty owing to the many interests involved, an investigation was made by the Secretary of the Provincial Board, and the existence of the nuisance was amply proved by a number of witnesses at Bridgeport. Mr. John Shuh, President of the woollen company, stated that the scourings and dye-stuffs were allowed to run into the creek, while, as was quite evident, the mill-dam at Bridgeport caused the settling of the heavier organic material in the pond and along the creek above. Decomposition of this material during the hot weather resulted in an effluvium nuisance of a pronounced character. On the suggestion of the Secretary, Mr. Shuh introduced a system of settling-tanks into which the scourings of the wool, which contain much organic matter, are run, and in which the organic matter is allowed to settle, slaked lime being added as a precipitant. The clear water is then run off into the creek. The dye-stuffs can hardly be considered as effluvium nuisances, although they are popularly looked upon as the chief nuisance on account of the unsightly colour given by them to the water. At St. Mary's a case of a similar character occurred and was referred to this Board. The colouring of the water was the nuisance complained of. In such a case the colouring matters might injure the fish, but it cannot be said that a nuisance exists affecting the public health.

The case referred to the Provincial Board from Sarnia is somewhat different, as the dye-stuffs are emptied into the bay at a point close above that whence the public water supply is pumped. In this case it might clearly be considered a public nuisance, since many of the dye-stuffs are of an exceedingly poisonous character. With so clear a case before it, the Local Board of Health can have no valid reason for delaying action in a matter affecting so widely public health interests.

5. *Cess-pools and Privies.*—Of all the nuisances coming under the class of effluvium nuisances, these constitute the most wide-spread, although of all, the easiest of mitigation or removal. There cannot be said to be any prejudice in favour of their continuance on the ground of their being considered the best mode for the disposal of excreta; but they remain in consequence of a want of knowledge in those using them of any better means, and from that *vis inertiae* in regard to everything which has the sanction of long custom. The By-laws of many Local Boards have provided for a systematic cleansing of privies at least once a year. This is the first step toward an improved system of disposing of excreta and securing the final abolition of privy pits and the substitution in their stead of earth closets under municipal control. Many of the annual reports of Local Boards show that many closets have been cleansed, and that in most of our larger towns the introduction of earth closets has begun. The continuance of privies and cess-pools is to be greatly deprecated from the increasing pollution of the wells, which are still in most places the source of water supply. Orders for removing closets have in some cases been issued. One of the most interesting instances during the year is that arising from the

order of the Local Board of Galt, for the removal of certain privies situated over Mill Creek, a stream flowing along the high level on the east of the town. Action was taken because this stream being dammed at various points, allowed organic matters to settle to the bottom, and water thus contaminated by faecal matter percolating into the wells on the river levels, would be likely to cause disease. The fact appeared to be established by the rise and fall of the wells corresponding with that of the creek. Refusal to obey the order of the Local Board caused the owner of a large establishment, the privies of which are situated over the creek, to be summoned before the magistrates. He was fined, but appealed from the decision, and the appeal was argued before a full bench. The Secretary of the Provincial Board was invited to be present to support the Local Board, while expert evidence was called for the defence. Conviction was again the result, the decision being based upon the terms of Section 4, Schedule A. Largely as the result of the agitation started by this case, a By-law has, we understand, been passed by the town council, providing for the adoption of the earth-closet system for the disposal of excreta. Difficulties are constantly occurring to Local Boards in connection with this matter. A case in Uxbridge, referred to the Provincial Board, in which the house-drain of one of the largest ratepayers was allowed to empty the contents of privy vault, kitchen slops, etc., close to one of the public streets, is one of the thousand examples to be found in the villages, towns and cities of the Province, where public sewers do not exist. While the disposal of kitchen and house slops is a matter of some difficulty, there can be none about the advisability of adopting earth-closets for the disposal of solid excreta. Where some system of this kind has not been enforced grave difficulties have arisen as in the instance reported by the Health Officer of the city of Hamilton. In that city as elsewhere persons building new houses without putting in water closets have simply connected their privy vaults with the town sewers. Municipal By-laws, for providing for the satisfactory removal of excreta, would in the light of improved sanitary methods seem to be very urgently required.

7. *Artificial Manufacture of Manure.*—The utilization of night-soil has in several localities become this year the occasion of nuisance so serious as to cause action to be taken against offenders. This has been the case in the north-western suburbs of Toronto, and at Brantford where, as can be seen in the correspondence of the Board, the Local Board of Brantford Township has had to take action. The Township Board found much difficulty in dealing with the matter owing to the offender having employed the night-soil to manufacture an artificial fertilizer near a dwelling, while the waggon used for carting was washed in a creek flowing through the premises of a neighbour. It was suggested by the Provincial Board that, while the Local Board was not bound to suggest remedies while causing the nuisance to be abated, they might very well suggest that, (1) the night-soil be carted away from the city in closed carts or waggons in zinc-lined boxes or barrels, which might be readily cleansed and would not become saturated; (2) that it be taken to a field at a long distance from any house, and there at once treated with sulphuric acid, which would serve to fix the ammonia, absorb the moisture, and destroy the organic matter. Ashes might be added to the extent desired. Should the contractor neglect to carry out this method, or should it, though carried out, not prevent the nuisance, then the Board ought to take the necessary legal steps to prevent the work being carried on. After allowing the offender in the matter several weeks for adopting the suggestions of the Local Board, the latter have proceeded against him for not appearing before the magistrate to answer the charges of creating a nuisance, under Sec. 35 of the Act, which imposes a fine for every day that he continues the manufacture after the order to desist has been issued by the Board. It is much to be regretted that the Local Board has been forced by the continuance of the manufacture, to proceed to such extremes, since the active work of the city of Brantford Local Board in causing the cleansing of privies and the advocacy of *ash-closets*, has led to what ought to be a paying industry, by supplying an artificial fertilizer to farmers.

8. *Mill-dams*—This subject was fully discussed in a paper by Dr. Arnott, read at the London Convention and published in the Second Annual Report of this Board, but a number of questions arising during the year, have again called our attention to it. The reasons why mill-dams are considered injurious to the public health are, (a) the fact that

from their very nature they favour the accumulation of organic debris of every kind ; (b) from this accumulation decomposition will take place to a greater or less extent, according to the season and circumstances ; (c) of these circumstances the principal one is that of the rising and falling of the water, due to the season and to its being used for milling purposes. The organic matter accumulating largely along the banks during high water will, with the lowering of the water level, which always takes place in the hot season, leave the organic matter, which has been reduced to a fine state of sub-division, and therefore in a condition especially favourable for decomposition, exposed to the sun's rays. The decomposition which follows under such circumstances is without doubt the cause of the intermittent and remittent fevers which are almost invariably present amongst the dwellers in the vicinity of such water, especially during August, September and October. Where these mill-ponds, situated within or below large towns or cities, receive sewage matters in addition to vegetable organic material, their detrimental influence upon the public health will naturally be greater. The great difficulty in dealing with these mill-ponds, from a sanitary standpoint, lies largely in the fact that the contamination of the atmosphere surrounding them is so general that the injurious effects from it are only occasionally noticed by the dwellers around them. Other considerations mentioned in the beginning of this chapter further explain why these sources of danger to the public health are not more fully appreciated. But assuming that the desire to remove these evils is present on the part of Local Boards of Health, much difficulty arises from the fact that personal interests are invariably involved. In most cases investments in milling property, in the construction of dams, etc., have been made at a time when no sanitary question was involved, or at any rate entertained, and when they become sources of danger to the public health the question of vested rights confronts us. It naturally follows from this that should the public interest require the removal of a dam, much public sympathy is felt for the person who would suffer thereby. When to this is added the fact that in some cases its removal would mean the loss of some industry to the municipality interested, it becomes apparent that there are few Local Boards in a position to successfully carry out what would be best for the public health. In instances in which people in one municipality are affected by mill-dams existing in another, the case is greatly complicated and the difficulty increased. From what has been said it is apparent that a question of great practical difficulty has to be dealt with. No general principle can be laid down in regard to compensation in such cases, for if the principle is once admitted, many other established industries, as fat-rendering establishments, cow-byres, etc., might with equal justice demand indemnity for their removal.

Two noteworthy instances of difficulties in connection with mill-dams have occurred during the past year. One is the case of Saunby's dam, London, and the other of a mill-dam at Teeswater. The case at London (to which allusion has already been made) is that in which the local board of London West has demanded the removal of a dam across the Thames between London West and London City. Application was made to the County Court Judge for an order for its removal, and was refused. The matter has been referred to the Provincial Board, and is still *sub judice*. The other case is that of a *jam* in the river flowing through the farm of one Hadwin, at Teeswater. Owing to the current being impeded by the jam, drift-wood and other organic debris had accumulated, and undergoing decomposition, had in the summer months created a public nuisance. The case involved several points of interest. The Local Board having decided that a nuisance existed, required Mr. Hadwin to remove the jam. To this demand he replied that the nuisance was not of his creating and refused to remove it, but expressed his willingness to allow it to be removed provided any timber in it were given to him. The jam contained some cedar of which he wished to make fence rails. The Board, on the other hand, was willing to remove the nuisance and take the timber as part payment for the expense of removal. The questions at issue being referred to the Provincial Board it was decided on legal advice that as Mr. Hadwin owned the farm on either side of the stream, which is not navigable, Mr. Hadwin was owner of the bed of the stream, and therefore responsible for the existence of the nuisance, and that the Local Board might compel him to remove the nuisance, or might itself do so and collect from him the expense of removal. The Local Board determined to remove the jam and collect expense of doing so by ordinary process

of law. This seemed to settle the difficulty when another arose in the fact that no money having been set apart by the Council for the use of the Board, the latter was unwilling to proceed with the work, as the Council was not prepared to advance money for such purpose, some members of the Council favouring Mr. Hadwin. The Act leaves the power of carrying out such work to the Council, or to the Board, when money is supplied by the Council, but makes no provision by which the Council is required to supply funds for such work. As a result of all the efforts of the Local Board their annual report shows that nothing further has been done in the matter.

9. *Sewage pollution of water.*—During the past year three places besides London have continued to occupy the attention of the Board on account of the pollution of water by the improper outfall of sewage, namely, Toronto, Hamilton, and Sarnia. The population of Toronto is now estimated at about 118,000, and the number of persons who discharge their sewage into the bay is increasing in a proportion greater than that of the mere increase in population, for a continually increasing number avail themselves of the "modern conveniences" of the water carriage or drainage system, so that the increase of pollution of the bay is greatly in excess of the increase of population; and while the bay is not land-locked, like that of Hamilton, still the accumulation of sewage in it is very large. The water front of the whole city, therefore, becomes a source of unpleasantness and of danger to the public health. Not only is the air polluted, but as the water supply pipe from the lake is laid on the bottom of the bay leaks may at any time contaminate with sewage the city water. In view of these facts a trunk sewer along the whole city front becomes a pressing necessity. The method of disposal of this sewage has been and is being extensively discussed. The same question of sewage disposal has interested the sanitarians in Hamilton during the past year. Among the various suggestions a scheme has been proposed whereby a series of tanks would be placed at the ends of main sewers, for the reception of the sewage and its upward filtration through coal cinders and earth, thereby purifying it before allowing it to pass into the waters of the bay. The scheme when last heard of was lacking in many practical details, but the principle has much to recommend it.

The discharge of sewers and private drains above the point where the water is pumped from the bay at Sarnia is a question admitting of easy solution. It was recommended by the Board more than two years ago that a trunk sewer should be built to carry all the sewage of the town to a point some distance below, there pouring its sewage into the rapid-flowing river St. Clair. This would be a complete solution of the difficulty. In view of the dangers of the existing method it is to be hoped the Local Board will have sufficient influence during the coming year to carry out this scheme, which it does not hitherto seem to have been able to do.

10. *Cemeteries.*—Another of the sources of danger to the public health, increasing with the increase in age and population of towns, is the presence of cemeteries so close to habitations that drainage from them may contaminate drinking water. In the replies received by this Board to a circular containing a question relating to this matter, sent out to Local Boards in the 203 cities, towns, and villages, and discussed in another part of this report, it appears that in some cases grave-yards are within a few yards of wells. The following quotation from a letter regarding a case referred to the Provincial Board is but an example of many which might be given:

"The population of our village is about 1,100; the grave-yard is facing on the main street in the most populous part of the village, within 100 yards of the post-office and the principal hotel. The ground and natural drainage is to the river, which is separated from the yard by a narrow street, also one of the principal thoroughfares."

In this instance the church authorities had been requested by the Local Board to desist from further burials, but had persisted in what they deemed their rights. The case having been submitted to the Provincial Board, legal opinion obtained was to the effect that burials could be prevented by a special by-law passed by the Council, under the Consolidated Municipal Act, 46 Vic., cap. 18, sec. 496, sub-sec. 14; but in this case, as in that of the Teeswater matter already referred to, the reeve and council would not

act in the matter. In view of the dangers which may arise from the continued burying in cemeteries in such positions, it would seem very desirable that legislation dealing with the matter be asked for at an early date.

11. *Sawdust*.—During the past year, as during the two previous ones, several references have been made to the Provincial Board regarding sawdust deposits. The views of the Board upon the subject have been already set forth to some extent. A great deal of information on the subject has been collected through replies to a circular; and a special report by the Secretary, to be found in the Appendices, serves to show that where deposits of sawdust occur along the shores of streams, but more especially on those of bays and ponds, and undergo fermentation and decay, malarial diseases and other results injurious to health, have very frequently followed. There are several difficulties in dealing practically with sawdust deposits. Primarily these are due to the perfect harmlessness of the sawdust when first deposited. In the early history of the settlement of any district, the saw-mill commonly becomes the nucleus of a village, the villagers being those engaged about the mill. The sawdust serves a very useful purpose in levelling roads, filling up hollows, etc., and as it is a deposit rather pleasant than otherwise, it is little wonder that an article serving so many useful purposes is thus so conveniently disposed of. The next stage of the process is where, most of the surroundings having been leveled, the sawdust is cast upon the bank of the stream or bay where the mill is situated. From this most of the future trouble arises. In most cases it is after the trouble has been created, the sawdust of past years having begun to decay, that its prevention is talked of. The mill-owners being the arbiters of the future of the little village, often living at some distance from it, refuse to see the dangers to health present, and of course are disinclined to do anything which imposes any new expense upon an industry often depressed from over-production. There are two remedies, however, which meet the difficulty arising from these deposits. One is incidental to the value of the industry. From year to year the mill becomes less profitable as the timber of the neighbourhood disappears. In the case of the small mills, which at one time were to be seen everywhere in Ontario, their operations in old-settled communities are practically finished, and nature is gradually restoring the sawdust to humus. Even the large mills in the lumbering districts proper will soon be lessening their operations, as the large proportion of pine south of the Laurentian water-shed in Old Ontario has now been consumed; moreover, some of them have through the action of the fisheries inspectors, been compelled to erect furnaces to burn their sawdust. From a health standpoint this latter procedure gives everything that can be desired, and only requires to be systematically carried out. When the sawdust is removed to the furnace by carriers worked by the machinery of the mills, it may with attention be perfectly performed. But in some instances, as seen by the Secretary of the Board, in an inspection made during the past summer, the carriers are allowed to fall into disrepair and the sawdust allowed to be carried down stream. In other cases, as at Ottawa, for unexplained reasons all the sawdust is allowed to fall directly into the stream, no attempt whatever being made to burn it. This is a matter of most serious import as regards both the fisheries, the public health and navigation of streams. Besides the effects in the immediate vicinity, the deposits accumulate in the bays and mill-dams along the streams below, and it will readily be seen that there will be dangers from the decomposition of the sediment to dwellers at such points along the streams. Plans of the simple furnaces needed, with their cost, are given in the report on Sawdust Deposits in the Appendix; and there can be no valid reason of expense why, in the case of mills creating large amounts of sawdust, such furnaces be not erected to burn it all.

From the character of the nuisances referred to in this chapter, it is apparent that some of them are so connected with the existence of mankind that they must always tend to exist in every community; and it therefore becomes the work of sanitarians to devise, and municipalities and individuals to adopt, measures which will lessen or remove them. The class depending upon industries of various kinds are remediable and will doubtless be mitigated as soon as public opinion is fully alive to the dangers arising from them, and compels manufacturers to accept the decision that the public health must be preserved rather than that (if that be the alternative) individual wealth be increased at its expense.

CHAPTER IV.

INVESTIGATION INTO THE CAUSES OF AND REMEDIES FOR VARIOUS
OUTBREAKS OF DISEASE REPORTED TO THE BOARD.

It might perhaps have been better to have divided this chapter into two distinct parts, since the work contained in the first portion is one which partakes of a theoretical character, while that in the latter is one made up largely of routine and executive details. Since, however, it cannot be said that the Board has at its disposal facilities enabling it to take up what may be termed the scientific part of this work of investigating causes of disease, as considered apart from the conditions favouring the development of the cause—it will serve our purpose to discuss under one chapter, what has been done in investigating the methods by which outbreaks of disease have been propagated, and what has been attempted in the way of suppressing them. To know the true cause of disease is certainly more difficult than to limit its spread; but in spite of enormous difficulties, year by year fresh progress is being made in this department of science. As practical sanitarians, we may be permitted to hope that with new light as to the causes of disease, fresh advances will also be made in the measures at present at our command for its control. Though with few exceptions epidemic disease has not been prevalent in Ontario during the past year, yet the operations of the Board in this field have been of unusual interest.

The year opened with telegrams informing the Board that Small-pox had broken out in Simcoe County, and the year ended with cheering telegrams of the favourable results of the Board's operations in Hungerford in suppressing the disease. During the twelve months of the year Small-pox has been present in thirteen counties in Ontario, and from the great number of cases one may conclude that the Province has been menaced during the whole year with the most loathsome of zymotic diseases. The Board has been actively engaged during the past year in limiting these outbreaks, and now looks back on the year's operations with pleasure at the thought of how successful the efforts of Local Boards, supplemented by those of the Provincial Board, have been in keeping the disease from becoming epidemic throughout the Province.

1. *Causes of Outbreaks of Disease.*—Although, as has been said in the introductory remarks of this chapter, the work of the Board during the year in what may be termed the pure science of the cause of disease, in other words its *etiology*, has been almost nothing, nevertheless, several investigations into the methods by which outbreaks have been made possible, have been carefully conducted. As, however, the conclusions regarding the methods by which disease is propagated depend, for their being comprehended, upon the theories held regarding the *materies morbi*, it will be proper, in a report presumably reaching the hands of these not always having professional access to the accounts of the latest advances in biological researches, to give a brief *résumé* of some of those researches carried on by foreign scientists up to date.

The past year's researches have aptly illustrated the truth of a remark made in the Second Annual Report of this Board. "In truth, it must on every hand be felt that the evolving of scientific order and precision must for a time, at least, be chaotic. To-day we have an apparently new fact; to-morrow it is modified or rejected, but a residuum of truth remains. The scientific mind of to-day is the crucible in which lies at the bottom the button of refined gold." At the time of writing a year ago, Prof. Koch's *bacillus tuberculosis* had become in the eyes of many an *ignis fatuus*; but to-day its existence may fairly be said to have been placed upon the list of known biological facts, and microscopic specimens have become common objects for sale in the scientific world. Within the year further experiments in France seemed to have placed his discovery of the *Coccoma bacillus*

of cholera, made in India and Egypt in 1883, similarly in the list of accepted facts, when we find his conclusions rudely questioned, and some would say overthrown, by French savants, and by Klein, Cunningham, and other well-known English authorities. It is to be hoped that a correct view of this question will be reached before long.

Klein's now well known researches regarding the *bacilli* of cholera, Pasteur's and Salmon's beautifully clear and conclusive experiments upon the *micrococcus* of chicken cholera, and the experiments of the latter regarding Texas cattle fever, and the researches which are being made by many independent observers on the question of *septic organisms*, especially in their pathological relationships, all indicate that marvellous progress is being made in bacteriology.

Synchronous with these experiments are those upon the substances which act as germicides or disinfectants. The past year has been signalized by the inauguration of a very extensive undertaking with this object in view. We refer to the appointment by the American Public Health Association of a committee to experiment on the action and relative value of various germicides. It is felt that a work of so extensive a character and involving so large an expenditure of time and money could be best conducted by combining the available resources of the many bodies on this continent interested in the subject. The Board has, therefore, had great pleasure in contributing to so praiseworthy an undertaking.

The scientific fact having been established that the destructive *materies morbi* of cholera, of hog cholera, and each of several other diseases, belong to a low class of organisms called microphytes, whose species have seemed infinite in number, the life history of which has, till the last few years, been very imperfectly known, it has been a matter of the deepest interest to determine whether the many varied fevers were modifications of a few species undergoing changes in form, incomplete in their development under ordinary physical conditions, or whether they are really a large family with numerous and distinct species, each with properties and qualities distinct and separate. It was of the first importance, from a sanitary standpoint, to have this point determined, since if it could be proved that saprophytes or that class of microphytes, which feed on dead organic matters, were capable, when being taken into the human system, of developing various types of disease, according to the individual idiosyncrasies or surrounding conditions then, as will readily be understood, most momentous issues would be involved. To determine these points many patient investigators have been labouring, and at the present moment the following may be considered some of the chief conclusions which have been arrived at.

(a) That while the numbers of microphytes, which may at different stages of their development, and under varying conditions, appear similar in form, are numerous, yet cultivation and inoculation experiments by Koch, Klein and others have already demonstrated that contrary to Buchner, regarding *bacillus communis*, as opposed to Sattler, in reference to *bacillus subtilis* undergoing changes in infusion of jequirity, and subversive of Graivitz' theory, by which a common microphyte *aspergillus* may become by cultivation pathogenic, the species of microphytes are definite and unchangeable, always tending to revert to their normal form. Fortunately, all latest experiments have tended to the conclusion, as stated by Dr. Klein, that, "Amongst the region of different species of micrococci and bacilli occurring in putrid substances, the great majority are quite harmless; when introduced into the body of an animal they are unable to grow and multiply, and therefore are unable to produce any disturbance. But some few species there are, which although ordinarily growing and thriving in putrid substances, possess the power, that when introduced into the body of an animal they set up a specified disease. . . . Those organisms, which are connected with the above morbid processes, possess this pathogenic power *ab initio*, not due to any peculiar condition of growth." Had the opposite conclusion been arrived at, then it is evident that there would be little use in searching into the cause of any zymotic disease, for it would only be necessary to assume certain conditions, in order to have produced small-pox, scarlatina or measles, or any other disease whatever. Remembering, however, that certain specific microbes do flourish in dead organic matter, outside living organisms, *e. g.*, *bacillus anthracis*, *bacillus septicus*, (microbes of Typhoid and Diphtheria?) the point is given to the sanitary rule for the completest possible

destruction of all dead organic matter, when exposed in such places as might, through the microbes feeding upon it, tend to contaminate air and water.

(b) The next point which biologists have been constantly engaged in investigating is, viz: given specific microbes, what are the means, if any, by which they can be either attenuated or destroyed? Following out the theory, which has seen practical results in vaccination for nearly one hundred years, Pasteur and Davaine have initiated and many others have followed up the question of the attenuation of virus. While doubt has been cast, with apparent reason, upon the efficacy of Pasteur's attenuated virus of charbon, sold in tubes known as *vaccin charbonneux*, yet a great advance has been made in exact knowledge of the subject. Professor Salmon lays down definite rules for the use of his vaccine for chicken cholera, and in the extended studies of *charbon symptomatique* by MM. Arloing, Cornevin and others, the following results have been obtained:—

(1) Minute doses of the fresh virus injected into the sub-cutaneous cellular tissue, confer immunity from subsequent infection.

2. Injected into the veins or respiratory passages, in moderate quantities, a slight disturbance results, and protection is found to be obtained.

3. Numerous experiments with antiseptics have shown that some of them change the virus into a vaccine inoculation, which confers immunity from future infection.

4. Dilutions of virulent fluids in certain cases may confer immunity.

Admitting that all that has been asserted has not been yet verified in practice, it is quite plain that something has been learned, and analogy from vaccination would lead us to infer that ere long definite practical results will have been obtained for us regarding our common zymotics, as scarlatina, measles, etc. The facts asserted by these workers have had other most practical sanitary bearings. Thus, we are informed that minute doses of fresh virus taken into the system confer immunity. In this fact we have a most powerful argument for cleanliness, as regards organic accumulations of whatever kind in sick rooms; since, while nurses, physicians and others, must of necessity inhale morbid germs, yet, if the amount is diluted by ventilation and antiseptics, the probabilities are that they become inoculated insufficiently to give them the disease in its virulent form, and yet sufficiently to make them insusceptible of further infection. In the study of antiseptics, too, great advance has been made. Working as it were backward, from the apparent power which microbes in certain solutions have of limiting their own development, Wernich, and after him many others, have found that the decomposition of *cultures* by microbes results in the formation of certain organic compounds, mostly of the so-called aromatic series, which act as germicides. On analysis of such solutions, they have been found to contain, notably from their decomposition of proteids, *phenylacetic* and *phenyl-propionic* acid compounds. These chemical compounds have been added to cultures containing microbes, when these latter have been rendered *aseptic*. In fact, true germicides have been discovered. For practical ends, however, as has been remarked by Dr. B. Sanderson, for an antidote against infection to be of great value it must be readily procurable, free from poisonous action, and have such physiological relations to the organism (when taken into the system), that it is capable of remaining sufficiently long to exercise its restraining influence on the process it is intended to counteract. Time, it is to be hoped, will give us what we seek in this direction.

2. *How Zymotic Diseases are Disseminated.*—From what has been remarked in the preceding chapter it will be plain that assuming the existence of a specific microbe, as the *materies morbi* of each zymotic disease, the spread of the latter will depend upon various causes, viz., (a) the number of the microbes to which people are exposed; (b) the frequency of their exposure; (c) the virulence of the virus; and (d) the susceptibility of those exposed to the disease.

No explanation is necessary to make it apparent that *a* and *b* will almost invariably be co-relatives. In the ordinary zymotics, the culture fluid being the human blood, it will be plain that whatever excretions of the body give them out to the air, will be the mediate cause of their being disseminated. Skin, respiratory organs, intestines and urinary organs are all involved, and give opportunities for contamination from them in various ways according to the absence of attenuating and disinfecting influences. As an

instance of a concentrated virus we may mention a fact which was observed by the Secretary of this Board during the recent outbreak in Hungerford. Eight persons were found lying in one room with no ventilation, each in some stage of the small-pox. No disinfection of the air was attempted, or even possible under the horrible circumstances. Not only were the germs of the disease being constantly given off to the air of the room, but to other organic accumulations there were added the volatile effluvia from lungs and scales from the skin, and secretions from the urinary and intestinal channels. Assuming that those going into the room were protected by vaccination, the volatile effluvia and scales from the skin would cling to clothing, especially of a woollen character, and be disseminated in various directions. Cats or dogs entering such a room would likewise be carriers of the virus. Since the chances of others contracting the disease from such exposed persons, would depend upon the amount carried on clothing, its freshness and the frequency of exposure, it is plain that those susceptible will, under such circumstances, contract the disease. An illustrative case showing how one exposure was sufficient for inoculation was seen in the visit of a reverend father to the Stoco hospital to administer spiritual consolation. Exactly fourteen days after his exposure he showed evidence of having the disease.

A sad case was related some months ago by a correspondent of the Board. A child had been ill with diphtheria and died. The clothing worn by her was given to another little girl. This child who wore the clothing took sick and died, and the two remaining children of the family contracted the disease and also died. Such are amongst the commonest means by which such diseases are disseminated. Other zymotics are conveyed by food and drink. Many examples may be adduced illustrating this fact. Amongst such articles milk, doubtless, is the commonest. In an outbreak of diphtheria at Hendon, January, 1883, when fourteen cases occurred almost simultaneously, all in houses supplied by a particular dairy, the water used in this dairy was taken from a pond, which was found to be fouled to a large extent with sewage. In a wide-spread outbreak at Smith's Falls during the month of December, 1883, and January, February and March, 1884, the purity of the milk was with reason doubted, after the filthy surroundings of the dairy had been examined. In this epidemic, a full report of which will be found elsewhere, the various sources of the disease are clearly shown. In an outbreak of typhoid fever at Almonte, investigated by the Secretary, a public well, some three feet from which ran a house-drain carrying off house-slops, which were allowed to soak into the ground at no great distance, was directly proved to be the cause of typhoid fever in at least six cases, all occurring in houses using water from the well. One or two other families in the vicinity not using water from this well escaped. Other cases, clearly traced to contamination of well-water from the public drain or so-called sewer, which received only accidental flushings, occurred in the same town. These are but typical examples of how disease is disseminated.

3. *Why Allowed to Spread?*—Charity would incline to the conclusion that ignorance of the sources is the chief reason why diseases are allowed to spread; but hard facts often point to quite different conclusions. Doubtless it happens occasionally, as in some cases of typhoid fever, that people are uncertain as to the cause; but in scarlet fever and whooping cough, diseases which even the most unlettered know to be spread by contagion, there is a gross neglect of precautions. There are many reasons: Poverty and the harassing duties of a mother often left to care for a large family of children, blunt her sensibilities through her feeling of helplessness. She is less careful to prevent contact from the conviction that all must have it, and they may as well get over it. Cupidity is another cause, as in the case of the smaller shopkeepers, who, we regret to say it, are at times assisted by the physician, and who endeavour to keep the presence of disease secret for fear of losing customers. An illustrative case of this is given in the details of the Smith's Falls diphtheria outbreak. When typhoid prevails it must be confessed that the municipal authorities, as frequently as private individuals, are culpable. This is notably the case in towns with contaminated sources of water supply, lack of means for disposal of sewage at its outlet, and, further, absence of inspection of drains, plumbing, etc.

4. *Methods adapted for their limitation and extinction.*—In the cases where outbreaks of contagious diseases have been reported the efforts of the Board have been in every case

first exerted in arousing local health authorities, where found apathetic, to a sense of the danger to the public health. This has been largely successful. In most, if not every case, local physicians have been the first, not only to warn the Provincial Board of such existing disease, but have also urged action upon the Local Boards. From the nature of things at present existing, this was to be expected, but remembering that such medical men are occupied in the treatment of disease, it is not to be expected that they can engage largely in its prevention. At this early day in the progress of sanitary knowledge it were perhaps unjust to expect that municipal councils should have as keen an appreciation of the economic benefits to be derived from active organizations for stamping out epidemics present amongst their constituents, as they have of the advantages to be gained from shortening a road to market by the erection of a new bridge; but it is quite apparent that if they continue to delegate public health work to local physicians who are expected to labour without pay as medical health officers for the good of the public, they need not expect local sanitary conditions to improve at all proportionately with the public needs. Not unnaturally, Local Boards endeavour to stamp out disease after the disease has made so much headway that its presence seems to threaten the immediate safety of the whole community. Such has been the case, noticeably in several local epidemics during the past year. It must not be forgotten, however, that the best work has probably in many instances been done in those municipalities of which but little has been heard, since the outbreaks of contagious diseases occasionally take place in every municipality, and the very nature of good sanitary work requires that first cases be so promptly dealt with that no second ones occur. In most cases, doubtless, this has been due to the skill of the physicians in charge, and it augurs well for the status of the profession in Ontario that, apart from Local Boards, so much has been done during the past year to prevent epidemics from obtaining, except in a few cases, much foothold in the Province.

It will be of interest, however, to refer to several local outbreaks as illustrating how the progress of organized sanitary effort is making itself felt for good in Ontario. One of the most extensive outbreaks of diphtheria during the year occurred in Smith's Falls, breaking out early in December, 1883, and lasting for several months. The full particulars of this outbreak, which extended to 36 families, have been received, and from them it appears there were in all 91 cases and 24 deaths. No Board of Health being in existence at the beginning of the outbreak, it attained such dimensions in a short time that public alarm caused a Board of Health to be formed. Seconded by several medical men of the district, the Board succeeded in isolating many cases and placarding the houses where cases of the disease were known to be. They then called upon the Provincial Board to aid them. The secretary of this Board visited Smith's Falls and made an investigation, a report of which is published in the Appendices. He also directed the Local Board as to methods of procedure in various emergencies, and delivered a public lecture on the sources of zymotic diseases and the best methods for combating them. The Local Board further distributed a large number of the pamphlets issued by the Provincial Board on "How to Check the Spread of Contagious Diseases." When the Health Act of 1884 went into force, the Local Board was organized on a new basis, and a Medical Health officer appointed. The disease, from the time that the Local Board of Health instituted and prosecuted active measures for its limitation, was practically under control, and the deaths which have since resulted from the disease have been very few.

Typhoid fever has not been present in many places during the past year as an epidemic, and the Provincial Board have not been called upon to investigate in many instances.

The reports of the investigations of the sanitary condition of the Penetanguishene Reformatory and of the Asylum for the Insane at Kingston indicate the great danger to which large numbers of people collected in public buildings are exposed when defects occur in the sewerage of these buildings, or when a contamination of the water supply takes place. Full reports of those investigations will be found in the Appendices. In an outbreak in the town of Almonte, to which reference has already been made, the Local Board of Health was rendered helpless in its efforts of reform from the absence of that financial aid which was necessary to carry out its proposed operations. The Secretary of the Provincial Board, after correspondence had failed in obtaining action on the

part of the Council, made a visit of investigation to the town, and reported thereon to the Provincial Board. A copy of the recommendations made after the investigation was sent to the Local Board. They were confirmed by the Provincial Board. A copy of them will be found in the Appendices. It is to be hoped, that with typhoid fever endemic in the town, its Council will more thoroughly appreciate, during the coming year than it has in the past, the necessity for undertaking comprehensive improvements, such as are indicated in the report of the Secretary. After years of a *laissez faire* policy in health matters, the town has much to do; and it is high time that a beginning was made by those who are conservators of its interests from both a commercial and a health standpoint.

In the Town of London East a severe outbreak of fever occurred along Carling's Creek during the early autumn months. This municipality, along with the municipalities of London City and London Township, petitioned the Provincial Board for an expression of opinion as to the most advisable way of disposing of the sewage of all these municipalities, which becomes yearly a greater nuisance to the public health. The question has been referred to the consideration of the Committee on Sewage of the Provincial Board to report so soon as the weather will permit of such an examination as must necessarily be made. Of all the outbreaks of epidemic disease which have created public alarm, and which have called for the promptest measures on the part of the Provincial Board, those of small-pox have been by far the most important. The excessive contagiousness of this disease, its fatal nature and the fear caused by its loathsome character, make it one which brooks of no delay, although too often it happens that the question of "who is to grapple with it?" becomes a very difficult one to answer.

It speaks volumes for some of the medical men who, as far as concerned them personally, were unfortunate enough to have these cases fall into their hands, that they should have aided so energetically in taking such means as limited the outbreak to the first case or cases; while in the public interest it is necessary to denounce in the strongest terms the action of others, who, for fear of injury to individual interests, have exhibited culpable carelessness in their action towards such cases.

Detailed reports concerning each of the outbreaks which have occurred during the year will be found in the Appendices. These reports will clearly show how want of proper methods in sanitary matters leads to serious illness, often loss of life, and unnecessary expense, while on the contrary prompt attention to the requisite preventive measures is followed by the very best results.

CHAPTER V.

STATISTICS OF DISEASE IN ONTARIO.

We feel great pleasure in again being able to report the continued progress of the work of collecting disease statistics in Ontario. The *Health Bulletins*, which at first, were published every week, are now issued monthly, and continue, as in the past, to furnish as fully as the circumstances of their collection will permit, a summary of the health conditions of the Province.

The *Bulletin* has been utilized by the Secretary as a convenient means of not only announcing the existence of special or unusual conditions of the public health, but also of stating in a brief and pointed manner inferences which may be drawn regarding the sanitary questions which these health conditions involve. It is pleasing to be able to report that these *Bulletins* are received with so much favour by the public that the leading daily journals publish very full summaries of their contents. The extensive circulation which is thus accorded by the press to matters which must be interesting to every reflecting mind will, no doubt, contribute materially to the education of the public in sanitary matters.

At the present day, when the study of natural science is being prosecuted with such assiduity that discoveries of new facts are of daily occurrence, and when in addition the immense number of subjects of study is considered, it is hardly to be wondered at that many feel themselves unequal to the effort of keeping pace with scientific progress. In order to make a general knowledge of these numerous discoveries at all possible, it is absolutely necessary that the basis principles underlying them be grasped, when the details of otherwise disjointed facts will take on form and order. Especially is this remark true in the field of disease. An enormous number of facts must be noted annually by the 2,000 medical practitioners in attendance on the 40,000 persons who, according to a calculation made last year, are ill at any one time during the whole year in Ontario. Could these facts be all collected, classified, studied and annotated, valuable contributions to science would be made. But if the comparatively few underlying principles, common to them all, could become generally known, what an enormous addition would be made to popular knowledge. It is, therefore, of the utmost importance in the study of disease that the largest possible collection of statistical facts be made, in order that the principles deduced from them may become known. When it shall become a perfectly well understood thing amongst the public at large, that most of our zymotics are examples of septicæmia, and that the microphytes of septicæmia are in a large measure dependent upon organic filth, as is becoming day by day more evident, it may be confidently predicted that such an epoch of cleanliness will be ushered in as has never been known since the days of the Israelites and their daily purifications.

From these statistics, and likewise from mortality statistics, we gain a knowledge of the special diseases incident to different occupations, seasons, sanitary surroundings, ages, localities and climates. To such statistics we look for our arguments to show the necessity for adopting municipal sanitary legislation, or governmental statutory enactments for enforcing general sanitary provisions, or for making vaccination compulsory. As was seen in the report of a single year's statistics—in last year's report—a number of important facts regarding prevailing diseases in Ontario have been pointed out, and the same may be said of this year's report. To illustrate this by a single fact, we have been able to ascertain from the exact statistics of the Hungerford outbreak, that the mortality from small-pox in that township presents among the vaccinated and the unvaccinated nearly the same proportion as has been found to be the case in other countries, viz:—6 per cent. of deaths in those previously vaccinated, and 33 per cent. in those never vaccinated. Similar satisfactory results will obtain in other districts, when we are able to obtain as thoroughly reliable data from which to make deductions.

2. *Their Sanitary Use, as Experienced by the Board.*—The issue of the *Bulletin* as a weekly, almost from the organization of the Board, has been one of the most valuable agencies by which we have been enabled to initiate and develop municipal health work throughout the Province. At no little inconvenience to themselves, medical men in all parts of the Province responded to the request of the Board to become its correspondents, and from them the Board has received many valuable suggestions, made with the view of increasing the usefulness and efficiency of the disease reports. But this is but a very small amount indeed of the public health work which these gentlemen have voluntarily performed. By their reports the secretary has been time and again informed of the epidemic prevalence of some virulent zymotic, a knowledge of which he would otherwise have never obtained, and the Board has thus been enabled to take effective action toward the end of restricting it. In fact, it may fairly be said that up to the time when the Health Act of 1884 came into force, containing a compulsory clause requiring a Local Board of Health to be formed in every municipality, no other machinery existed by which the Board could keep itself informed of the state of the public health throughout the Province. Dangers to the public health of various kinds have been reported again and again; and correspondents of the Board have been as courteous in assisting in their suppression as they have been in reporting them. The Board has further succeeded in adding to its list of correspondents the medical health officers who have recently been appointed, and who form a percentage of nearly one-tenth of all the practitioners of the Province. Judging from the willingness of those last mentioned gentlemen, the Board feels assured that there are very many more members of the medical profession in Ontario who will aid in what the Board feels no hesitation in characterizing as one of the most successful attempts ever made to obtain statistics of diseases. But in making this assertion we do not wish to be understood as asserting that our disease statistics have the soundness and completeness of statistics taken in the army, navy, or hospital services under circumstances more or less special; but we think their value consists principally in the fact that they are a faithful reflex of most of the disease conditions prevalent among the 2,000,000 who form the population of Ontario.

Their Statistical Value.—As we remarked in the Second Annual Report, "The Board does not assume to dogmatize concerning any deductions drawn from a study of these statistics." This is due to the fact that from the limited number of reports, generalizations can only be made with extreme care, yet, should year after year see the same facts repeated, it may fairly be concluded that any inferences drawn from them will be in a large measure correct. Remembering the very many elements which enter into any pathological fact, as those of age, surrounding conditions, climate, etc., it makes it a matter in some cases of extreme difficulty to determine how much influence must be assigned to any given condition. But, while this is true, there are, nevertheless, certain well-grounded conclusions slowly growing up regarding the causes of the prevalence of certain diseases, under certain conditions, and of no class can this be more truly said than of Zymotic diseases, or those which it especially becomes the sanitarian to study. We trust that the statistics of disease in Ontario may continue to be interesting to many members of the medical profession in this Province, and that they will continue in increasing numbers to aid us in extending a work which promises to be of real benefit to medical science.

How Obtained and how Utilized.—On this subject almost nothing new can be said in addition to what has been written in the two past reports of the Board. The public have become so familiar with these reports as they appear in the newspapers, that they already partly understand how the statistics are utilized. Another method, however, in which they have been used is that seen in the extended study made of them in the Second Annual Report of the Board. It is to be hoped that a shorter study based upon similar data, to be found in an appendix of this report, will be found as interesting as we believe the last has proved to those who were willing to patiently study the mass of details presented in it. The utilization of these data for sanitary purposes, by obtaining from them knowledge regarding local outbreaks of disease, thus enabling the Board to urge or cause to be taken by local health authorities, active measures for the suppression

of these outbreaks has been already mentioned. What these statistics have done in the past they will continue to do in the future, while, as Local Boards of Health become more efficient, we may fairly hope to see them adopting similar schemes for obtaining in their respective municipalities such complete reports as will enable them to be thoroughly acquainted with the type of disease which may be prevalent in their midst and be thus in a position to effectually combat it.

In concluding this report, which briefly sets forth the work done during the year, it gives the Provincial Board much pleasure to note the rapidly spreading knowledge concerning many of the sanitary matters with which the Board is called upon to deal, and that as a consequence of this, the necessity is lessened for extending the details of this report to the extent which last year it was deemed advisable. It suffices to say that the Board trusts that the report will be found to contain a complete summary of the work done, and of the methods which have been adopted in performing it. What was remarked in the conclusion of the Second Annual Report may be repeated here : " That if Ontario has but little room for self-laudation, she has in a relative sense no cause for self-condemnation " in regard to the action taken in matters pertaining to the public health ; and the Board would hope that its persistent efforts for obtaining more extended action in Canada in regard to public health matters by drawing the attention of the Federal Government and those of the other Provinces to them may result in the establishment of a national system for the promotion of the public health, the far-reaching benefits of which it is impossible to estimate. We welcome the prospect that during the coming year the sister Province of Manitoba will establish an organization on a basis similar to our own ; and the Board will not cease to entertain the hope that to the eastward we shall soon have raised up Dominion and Provincial barriers to the fatal progress toward us of those epidemic diseases which, through our relations with the motherland, are ever likely to be introduced.

All which the Board respectfully submits to your Honour.

C. W. COVERNTON, Chairman.

P. H. BRYCE, Secretary.

PART II.

APPENDICES.

APPENDIX A.

ARTICLE I.

AN ACT TO MAKE FURTHER PROVISIONS RESPECTING THE PUBLIC HEALTH.

Chapter 38, R. S. O.

HER MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows :—

PART I.—PRELIMINARY.

1. This Act may be cited as "*The Public Health Act, 1884.*"

Short title.

2. In this Act the following words and expressions shall have the meaning hereinafter assigned to them respectively, unless such meaning is inconsistent with the context, that is to say :

(1) "Owner" means the person for the time being receiving the rent of the lands or premises in connection with which the word is used, whether on his own account or as agent or trustee of any other person, or who would so receive the same if such lands and premises were let.

(2) "Health District" or "district" means any local municipality, or union of local municipalities, under the jurisdiction of a Local or District Board of Health, and "Local Board" or "Board" shall include a District Board.

"Health District," "District," "Local Board," and "Board."

(3) "House" includes schools, factories and other buildings, huts and tents used for human habitation or work, whether such use is permanent or temporary, and whether the same are stationary or movable.

(4) "Street" shall include every highway, road, square, row, lane, mews, court, alley and passage, whether a thoroughfare or not.

3. Whenever this Province, or any part thereof or place therein appears to be threatened with any formidable epidemic, endemic, or contagious disease, the Provincial Board of Health may, subject to the approval of the Lieutenant-Governor in Council, issue such regulations as the Board deems necessary, for the prevention, as far as possible, or the mitigation, of disease, and may make, renew or alter any such regulations, or substitute new regulations : and the said Board may, by such regulations, provide :

Powers of Provincial Board to make regulations for prevention or mitigation of disease.

(1) For the frequent and effectual cleansing of the streets, yards, and out-houses, by the local health authorities, or by the owners or occupiers of houses and tenements adjoining thereto.

(2) For the removal of nuisances.

(3) For the cleansing, purifying, ventilating and disinfecting of houses, churches, buildings, and places of assembly, railway stations, steamboats, railway carriages and cars, as well as other public conveyances by the owners and occupiers, and persons having the care and ordering thereof.

(4) For regulating, so far as this Legislature has jurisdiction in this behalf, with a view of preventing the spread of infectious disease, the entry or departure of boats or vessels at the different ports or places in Ontario, and the landing of passengers or cargoes from such boats or vessels, or from railroad carriages or cars, and the receiving passengers or cargoes on board the same.

(5) For the safe and speedy interment of the dead, and the conduct of funerals, with a view of preventing the spread of infectious diseases as aforesaid.

(6) For supplying medical aid, and accommodation, and medicine, and such other articles as may be deemed necessary for mitigating such epidemic, endemic, or contagious disease.

(7) For house to house visitation.

(8) For preventing or mitigating such epidemic, endemic or contagious disease in such other manner as to the said Provincial Board seems expedient.

Local Boards
to see to
execution of
regulations.

4. It shall be the duty of the Local Boards of Health to superintend and see to the execution of any such regulations; or to execute, or aid in executing the same within their respective districts; and to do and provide all such acts, matters and things as are necessary for superintending or aiding in the execution of such regulations, or for executing the same as the case may require.

Provincial
Board may
determine
extent of
liability to
which regula-
tions are to
apply.

5. The Provincial Board of Health may, by order, declare all or any of the regulations so made to be in force within the whole or any part or parts of the district of any Local Board of Health or any municipality, and, so far as this Legislature has jurisdiction, to apply to boats, vessels, railway carriages and cars, or other conveyances in any portion or portions of the Province.

Publication of
orders and
regulations.

6. All orders and regulations so made shall take effect from the approval thereof and shall be forthwith published in the *Ontario Gazette* and at least one newspaper within the district, or portion or portions of the Province, in which they shall be declared in force.

Conflicting
by-laws of
Local Board
suspended.

7. During the time that any such orders or regulations are in force in any Health District as provided by the four next preceding sections of this Act, all by-laws of the Local Board of such district which, in any manner, conflict with any such order or regulations, shall be suspended.

Expenses of
Provincial and
Local Boards,
how defrayed.

8. The expenses incurred by the said Provincial Board of Health in connection with such epidemic, shall be defrayed out of any moneys appropriated by the Legislature specially for that purpose, and the expenses incurred by the said Local Boards of Health in the execution or in superintending the execution of the regulations of the Provincial Board, shall be defrayed and provided for by the Municipal Corporations having jurisdiction over the respective places affected.

Prosecution
for neglect of
regulation.

9. The Local Board of Health may also, from time to time, direct any prosecution or legal proceedings for, or in respect of, the wilful violation or neglect of any such regulation.

Meetings of
Board.

10. The Provincial Board of Health shall meet quarterly at Toronto, and at such other places and times as may be fixed under a resolution of the Board. Three members shall be a quorum for the transaction of business.

11. With the concurrence of that member of the Executive Council to whose department the Provincial Board of Health is for the time being assigned by the Lieutenant-Governor in Council, the Board may send its secretary, or any member or members of the Board, to any part of the Province when deemed necessary, to investigate the cause or causes of any contagious or other disease or mortality ; and at such investigation evidence may be taken on oath or otherwise as the said secretary, member or members may deem expedient ; and in such case the secretary, or any member of the Board present at the investigation, may administer the oath ; and the said investigating committee shall have power by warrant, under the hand and seal of any one of its members, to call upon any person to give evidence regarding any matter in question in the said investigation ; and the said investigating committee shall have all the powers which may be conferred upon Commissioners under *The Act respecting Inquiries concerning Public Matters*. Investigations as to causes of contagious or other diseases.

PART II.—LOCAL BOARDS OF HEALTH : THEIR ORGANIZATION.

12. (1) All the powers and authorities conferred upon or vested in the members of any municipal council or councils by any statute of the Legislature of this Province, as health officers of the said municipality or municipalities, shall hereafter be vested in the Local or District Board of Health which shall be formed in such municipality or municipalities as hereinafter provided. Local Boards of Health, their constitution and powers.

(2) There shall be a Local Board of Health in each township and incorporated village, to be composed of the reeve, clerk and three ratepayers, to be appointed annually by the municipal council.

(3) There shall be a Local Board of Health in each town containing less than four thousand inhabitants according to the municipal enumeration of the previous year, to consist of the mayor, clerk and three ratepayers, to be appointed annually by the municipal council.

(4) There shall be a Local Board of Health for each city and for each town containing more than four thousand inhabitants, according to the municipal enumeration of the previous year, to consist of the mayor and eight ratepayers, to be appointed annually by the municipal council.

13. (1) The first appointment of members of the said Board shall be made at the first meeting of the municipal council after the first day of May next. Appointment of members of Board.

(2) The annual appointments thereafter shall be made at the first meeting of the municipal council after being duly organized, and any vacancy arising from any cause shall be filled at the first meeting thereafter of the municipal council ; but, if for any reason appointments are not made at the said dates, the same shall be made as soon as may be thereafter.

14. Two or more councils may, by concurrent by-laws, unite their respective municipalities into a Health District ; and any of such councils may withdraw its municipality from the District by a by-law passed prior to the first day of December of any year, and to take effect on the third Monday of January following. Union of municipalities in one Health District.

Constitution
of District
Boards of
Health.

15. The members of the District Boards of Health shall consist of three members from each municipality included in the District, namely: the head of the council, the municipal clerk, and one other ratepayer not a member of the council, to be appointed by the council.

Powers of Dis-
trict Boards.

16. Every District Board thus constituted and its members shall, in respect of the Health District for which it acts, possess the same powers, be subject to the same regulations, and perform like duties as a Local Board of Health of a municipality and its members.

Officers of
Local or Dis-
trict Boards.

17. Every Local or District Board shall elect a chairman, and the Clerk of the Municipal Council shall be the secretary of the Local Board, and the District Board may elect one of its members, or appoint some other person, as its secretary.

Secretary to
report to sec-
retary of Pro-
vincial Board
the names of
members.

18. It shall be the duty of the secretary to report to the secretary of the Provincial Board of Health the names of the members of the Local Board within one month after its first regular meeting, which shall be held on the second Monday after the members, who are not members *ex officio*, have been appointed.

Provincial
Board may
appoint to
Local Board
in case Council
neglects to do
so.

19. When any municipal council neglects or refuses to elect members or a member of the Local or District Board of Health as required by this Act, the Provincial Board of Health may appoint a duly qualified ratepayer or ratepayers to be a member or members of such Local or District Board of Health to act with the *ex-officio* or other members.

Appointment
of Medical
Health Officer
and Sanitary
Inspector.

20. Every Municipal Council may appoint a Medical Health Officer and a Sanitary Inspector or Inspectors for the municipality, and may fix the salaries to be paid them, or two or more councils may unite in the appointment of any of these officers.

PART III.—POWERS AND DUTIES OF LOCAL BOARDS.

Appropriation
for work.

21. The Municipal Council or Councils may vote such sums as are deemed necessary by the Local or District Board for the carrying on of its work.

Health
Officers.

22. The members of the Local and District Boards shall be Health Officers within the meaning of *The Revised Statute respecting the Public Health*, and shall have the powers and duties assigned to Health Officers by the said Act, and the other powers and duties assigned by this Act.

Quorum.

23. A majority of the number of any regularly constituted Board shall be a quorum for the transaction of business.

Duties of
Secretary.

24. A minute book shall be provided in which the Secretary shall record the proceedings of the Local Board of Health. The Secretary shall draft an annual report of the sanitary work done during the year, and of the sanitary condition of the municipality, for the consideration of the Board; which report, when adopted, shall be transmitted to the Secretary of the Provincial Board of Health. The said report shall include the annual report of the Medical Health Officer.

25. Whenever any Local Board of Health has any authority to direct that any matter or thing should be done by any person or corporation, such Local Board of Health may also, in default of its being done by the person, direct that such matter or thing shall be done at the expense of the person in default, and may recover the expense thereof with costs by action or distress; and, in case of non-payment thereof, the same shall be recovered in like manner as municipal taxes.

Mode in which Local Board may enforce its authority.

26. Wherever the order of any Local Board of Health or Health Officer involves an expenditure of more than \$100, the party against whom the order is made, or anyone chargeable with such expenditure, or any part thereof, may within four days from his being served with a copy of such order in writing, appeal therefrom to the County Judge, who shall have full authority to vary or rescind the order made, and any order so varied may be enforced by the board or officer in the same manner as an order originally made by the board or officer.

Appeal to County Judge in certain cases.

27. Any costs or expenses recoverable from an owner of premises under this Act, or under any provision of law in respect of the abatement of nuisances, may be recovered from the occupier for the time being of such premises; and the owner shall allow such occupier to deduct any moneys which he pays under this enactment out of the rent from time to time becoming due in respect of said premises, as if the same had actually been paid to such owner as part of said rent: Provided, that no such occupier shall be required to pay any further sum than the amount of rent for the time being due from him, or which after demand of such costs or expenses from such occupier, and after notice not to pay his landlord any rent without first deducting the amount of such costs or expenses, becomes payable by such occupier, unless he refuses truly to disclose the amount of his rent and the name and address of the person to whom rent is payable; but the burden of proof that the sum demanded from any such occupier is greater than the rent due by him at the time of such notice, or which has since accrued, shall be on such occupier: Provided, also, that nothing herein contained shall affect any contract between any owner or occupier of any house, building or other property whereby it is, or may be, agreed that the occupier shall pay or discharge all rates and dues and sums of money payable in respect of such house, building or other property, or affect any contract whatever, between landlord and tenant.

Recovery of costs and expenses of execution of provisions relating to nuisances. Proviso.

Nuisances, etc.

28. It shall be the duty of every Local Board of Health to cause to be made, from time to time, inspection of its district, in order to prevent the accumulation within the district of any dirt, filth or other thing which may endanger the public health, and with a view to ascertain what nuisances exist calling for abatement under the powers of this Act, or of *The Revised Statute respecting the Public Health*, and to enforce the provisions of this Act and the said Revised Statute in order to abate every such nuisance.

Duty of Local Board to inspect districts for detection of nuisances.

29. A medical health officer of a municipality may exercise any of the powers conferred upon health officers by sections 3, 4 and 5 of *The Revised Statute respecting the Public Health*, and may, without being specially authorized by the Board, exercise any powers which under section 6 can be conferred upon two medical practitioners, and the Board may act on his report.

Powers of Medical Health Officer.

30. Information of any nuisance or unsanitary condition under this Act within the jurisdiction of any Local Board may be given to such Local Board by any person aggrieved thereby, or by any two inhabitant householders, or

Information of nuisances to Local Board.

by any officer of such Local Board, or by any constable or officer of the police force within the jurisdiction of the Board.

Investigation
to be made by
Local Board.

31. Whenever such information has been so given, it shall be the duty of the Local Board of Health to investigate the cause of the said complaint ; and to hear the testimony of all persons who may be produced before it to testify in respect of any such matter ; and every Local Board or any two of its members shall have the same authority as a Justice of the Peace to require and compel the attendance of witnesses and the giving of evidence.

Local Board
to serve notice
requiring
abatement of
nuisance.

32. Whenever the Local Board of Health is satisfied of the existence of the nuisance, it shall serve a notice on the person by whose act, default or sufferance the nuisance arises or continues, or, if such person cannot be found, on the owner or occupier of the premises on which the nuisance exists or from which the same arises, requiring him to abate the same within a time to be specified in the notice, and to execute such works, and do such things, as may be necessary for that purpose, provided :

First,—That when the nuisance arises from the want or defective construction of any structural convenience, or where there is no occupier of the premises, notice under this section shall be served on the owner ;

Second,—That where the person causing the nuisance cannot be found, and it is clear that the nuisance does not arise or continue by the act or default of the owner or occupier of the premises, and it is therefore improper that such owner or occupier should be required to abate the said nuisance, the Local Board of Health may report the facts to the municipal council or councils, and such council or councils may abate the nuisance at the expense of the municipality or district.

Power to
proceed where
cause of
nuisance arises
without dis-
trict.

33. Where a nuisance in any municipality or district appears to be wholly or partially caused by some act or default committed or taking place outside of the said municipality or district, the Board of Health of such municipality or district may take or cause to be taken against the person by whose act or default the nuisance is caused in whole or in part, any proceedings in relation to nuisances by this Act authorized, with the same incidents and consequences, as if such act or default were committed or took place wholly within its jurisdiction, so, however, that summary proceedings shall in no case be taken otherwise than before a court having jurisdiction in the municipality or district where the act or default is alleged to be committed or take place.

Recovery of
costs and ex-
penses incur-
red in abating
nuisances.

34. All reasonable costs and expenses incurred in abating a nuisance shall be deemed to be money paid for the use and at the request of the person by whose act, default or sufferance the nuisance was caused, and such costs and expenses shall be recovered by the municipal council or Local Board of Health or person incurring the same, under ordinary process of law ; and the court shall have power to divide costs, expenses and penalties between persons by whose acts or defaults a nuisance is caused as to it may seem just.

Restriction or
establishment
of offensive
trades.

35. In case any person after the passing of this Act, establishes, without the consent of the municipal council of the locality, any offensive trade ; that is to say, the trade of :—

Blood boiling, or
Bone boiling, or
Refining of coal oil, or
Extracting oil from fish, or

Storing of hides, or
 Soap boiling, or
 Tallow melting, or
 Tripe boiling, or
 Slaughtering of animals, or
 The manufacturing of gas, or

any other noxious or offensive trade, business or manufacture, or such as may become offensive, he shall be liable to a penalty not exceeding \$250 in respect of the establishment thereof; and any person carrying on a business so established shall be liable to a penalty not exceeding \$10 for every day on which, after notice in writing by the Local Board, or an officer thereof, to desist, the offence is continued, whether there has or has not been any conviction in respect of the establishment thereof.

36. (1) If on an investigation by any Local Board of Health any nuisance or thing prejudicial to health is found to exist in a municipality in which it has jurisdiction; and if, after the Board has required the removal or abatement of the same within a specified time, the Board finds that default in such removal or abatement has been made, and the case seems to the Board one involving considerations of difficulty owing to the fact that such removal or abatement involves the expenditure or loss of a considerable sum of money, or that any trade or industry is seriously interfered with, or owing to other circumstances, the Local Board of Health may apply to the Provincial Board of Health to investigate and report upon the same, and it shall be the duty of the said Provincial Board, with the approval of the Minister of the Department, to make a full investigation and report.

Provision where abatement of nuisance involves considerations of difficulty.

(2) If the said report recommends the removal or abatement of such nuisance or thing, the Local Board or any ratepayer of the municipality, or within a mile thereof, may apply to the High Court of Justice, for an order for the removal, or abatement of the nuisance or unsanitary condition, and to restrain the proprietors of any such industry from carrying on the same, until the said nuisance shall have been abated to the satisfaction of the Provincial Board of Health; and the said judge may, if he thinks proper, issue such order upon the report of the Provincial Board of Health.

37. (1) Whenever information is obtained by the Provincial Board that any remediable unsanitary condition or nuisance exists in any municipality, and that the local health authorities have, after proper representation of the facts, neglected or refused to take such efficient measures as might remove such condition or abate such nuisance, it shall be competent for the Provincial Board of Health to institute an investigation, and, if necessary, take sworn evidence concerning the condition or nuisance complained of.

Proceedings on complaint to Provincial Board of Health in default of local authority.

(2) If, upon such investigation it is proved that such remediable unsanitary condition or nuisance exists, it shall be within the province of the Provincial Board to direct its immediate removal or abatement by the individual or person responsible therefor, and to report the same to the Minister for the time in charge of the Department; and if such individual or person neglects or refuses to remove or abate the same, the Provincial Board of Health may cause such removal or abatement to be made, and collect the expenses therefor from such individual or person by ordinary process of law.

Contemplated Systems of Public Water Supply, Sewerage, Drainage, etc.

38. (1) Whenever the establishment of a public water supply or system of sewerage shall be contemplated by the council of any city, town or village,

Plans relating to proposed public water

supply or system of sewerage to be submitted to Provincial Board.

it shall be the duty of the said council to place itself in communication with the Provincial Board of Health, and to submit to the said Board, before their adoption, all plans in connection with said system.

(2) It shall be the duty of the Provincial Board of Health to report whether, in its opinion, the said system is calculated to meet the sanitary requirements of the inhabitants of the said municipality; whether any of its provisions are likely to prove prejudicial to the health of any of the said inhabitants, together with any suggestions which it may deem advisable; and to cause copies of said report to be transmitted to the Minister of the Department to which the said Provincial Board of Health is attached, and to the Clerk of the Municipal Council, and the Secretary of the Local Board of Health of the District interested.

(3) No sewer, or appliance for the ventilation of the same, shall be constructed in violation of any of the principles laid down by the Provincial Board of Health, subject to appeal to the Lieutenant-Governor in Council.

Unsound Meat, etc.

Power of Medical Health Officer or Sanitary Inspector to inspect meat, etc.

39. (1) Any Medical Health Officer or Sanitary Inspector may, at all reasonable times, inspect or examine any animal, carcase, meat, poultry, game, flesh, fish, fruit, vegetables, grain, bread, flour, or milk exposed for sale, or deposited in any place for the purpose of sale, or for preparation for sale, and intended for the food of man: the proof that the same was not exposed or deposited for any such purpose, or was not intended for the food of man, resting with the party charged; and if any such animal, carcase, meat, poultry, game, flesh, fish, fruit, vegetables, grain, bread, flour or milk appears to such Medical Officer or Inspector to be diseased, or unsound, or unwholesome, or unfit for the food of man, he may seize and carry away the same, or cause it to be seized and carried away, in order that he may cause it to be destroyed or so disposed of as to prevent it from being exposed for sale or used for the food of man.

(2) The person to whom the same belongs, or did belong at the time of exposure for sale, or in whose possession or on whose premises the same was found, shall be liable to a penalty not exceeding \$100 for every animal, carcase, or fish, or piece of meat, flesh or fish, or any poultry or game, or for the parcel of fruit, vegetables, grain, bread or flour, or for the milk so condemned; or, at the discretion of the convicting justices or magistrate without the infliction of a fine, to imprisonment for a term of not more than three months.

Penalty for hindering officer from inspecting meat, etc.

40. Any person who in any manner prevents any Health Officer or Sanitary Inspector from entering any premises and inspecting any animal, carcase, meat, poultry, game, flesh, fish, fruit, vegetables, grain, bread, flour or milk exposed or deposited for the purpose of sale and intended for the food of man; or who obstructs or impedes any such Medical Officer, or Inspector, or his assistant when carrying into execution the provisions of this Act, shall be liable to a penalty not exceeding \$25.

Infectious Diseases and Hospitals.—Provisions against infection.

Local Board to notify owner of premises requiring to be cleansed and disinfected.

41. Where any Local Board of Health is of opinion, on the certificate of its Medical Health Officer or of any other legally qualified medical practitioner, that the cleansing and disinfecting of any house, or part thereof, and of any articles therein likely to contain infection, would tend to prevent or check infectious disease it shall be the duty of such Local Board of Health to give notice in writing to the owner or occupier of such house or part thereof,

requiring him to cleanse and disinfect, to the satisfaction of the Medical Health Officer, such house or part thereof and articles, within a time specified in such notice.

42. If the person to whom notice is given fails to comply therewith, he shall be liable to a penalty of not less than twenty-five cents and not exceeding \$2 for every day during which he continues to make default; and the Local Board of Health shall cause such house, or part thereof, and articles to be cleansed and disinfected, and may recover the expenses incurred from the owner or occupier in default in a summary manner.

Penalty, if notice not complied with.

43. Where the owner or occupier of any house or part thereof is, from poverty or otherwise, unable, in the opinion of the Local Board of Health, efficiently to carry out the requirements of the two preceding sections, such Local Board of Health may, without enforcing such requirements on the owner or occupier, cleanse or disinfect such house, or part thereof, and articles, and defray the expense thereof.

Special provision in case of poverty of owner.

44. In case the small-pox, or any other disease dangerous to the public Health, breaks out in any municipality, the health officers or Local Board of Health, in case the municipality shall not have already provided the same, shall immediately provide such a temporary hospital, hospital-tent, or other place or places of reception for the sick and infected, as they shall judge best for their accommodation and the safety of the inhabitants, at the cost of the municipality, and for that purpose may

Power of Local Board to provide hospitals.

(1) Themselves erect such hospital-tents, hospitals, or places of reception ; or

(2) Contract for the use of any such hospital or part of a hospital or place of reception ; or

(3) Enter into any agreement with any person having the management of any hospital, for the reception of the sick inhabitants of their district, on payment of such annual or other sum as may be agreed on ; or

(4) Two or more Local Boards of Health may combine in providing a common hospital.

45. Any Local Board of Health may provide, maintain, or hire a carriage or carriages, suitable for the conveyance of persons suffering from disease or accident, and may pay the expense of conveying therein any person so suffering to a hospital or other place of destination.

Provision of conveyance for persons suffering from disease or accident.

46. Whenever any householder knows that any person within his family or household has the small-pox, diphtheria, scarlet fever, cholera, or typhoid fever, he shall within twenty-four hours give notice thereof to the Local Board of Health, or to the Medical Health Officer of the district in which he resides, and such notice shall be given either at the office of the Medical Health Officer, or by a communication addressed to him and duly mailed within the time above specified, and in case there is no Medical Health Officer, then to the Secretary of the Local Board of Health either at his office or by communication as aforesaid.

Notice to be given by householder in case of small-pox, etc.

47. No householder in whose dwelling there occurs any of the above mentioned diseases, shall permit any person suffering from any such disease, or any clothing or other property to be removed from his house, without the consent of the Board or of the Medical Health Officer or attending physician,

Householder not to permit removal of person or of clothing.

and the said Board, or Medical Health Officer, or attending physician, shall prescribe the conditions of such removal.

Removal of sick persons and others in same household.

48. No person sick with any of the diseases above specified shall be removed at any time except by permission and under direction of the Board of Health, or Medical Health Officer, or attending physician, nor shall any occupant of any house in which there exists any of the above diseases, except typhoid fever, change his or her residence to any other place without the consent of the Board, or of the Medical Health Officer, or attending physician who shall in either case prescribe conditions as aforesaid.

Report to be made by Physician.

49. Whenever any physician knows that any person whom he is called upon to visit is infected with small-pox, scarlet fever, diphtheria, typhoid fever, or cholera, such physician shall within twenty-four hours give notice thereof to the Local Board of Health, or Medical Health Officer of the municipality in which such diseased person is, and in such manner as is directed by rules 2 and 3 of section 17 of Schedule A.

Precautions to be taken against spread of infection.

50. When the small-pox, scarlet fever, diphtheria, cholera, or any other contagious disease, dangerous to the public health, is found to exist in any municipality, the health officers or Local Board of Health shall use all possible care to prevent the spreading of the infection or contagion, and shall give notice of infected places by such means as, in their judgment, is most effective for the common safety.

Sick person or persons having access to sick not to mingle with general public.

51. Except the attending physician or clergyman, no person affected with small-pox, scarlet fever, diphtheria or cholera, and no person having access to any person affected with any of the said diseases shall mingle with the general public until such sanitary precautions as may be prescribed by the Local Board or attending physician shall have been complied with.

Power to enter on steamboats, etc.

52. (1) Where there is reason to suspect that any person who has the small-pox, diphtheria, scarlet fever, cholera, or typhoid fever, is in or upon any railway car, steamboat, stage, or other conveyance, the Medical Health Officer, or Sanitary Inspector of the municipality, or, if there is no such officer, any member of the Local Board of Health, may enter such conveyance and cause any such person to be removed therefrom, and may detain the conveyance until it is properly disinfected; or such officer or member may, if he thinks fit, remain on or in, or re-enter and remain on or in, the said conveyance (with any assistants he may require) for the purpose of disinfecting the same, and his authority as a health officer shall continue in respect of such a person and conveyance, notwithstanding the conveyance is taken into any other municipality.

(2) Any member or officer of the Provincial Board of Health, or any medical practitioner authorized by such Board, shall have the like authority.

Isolation of persons infected or who have been exposed to infection.

53. In case any person coming from abroad, or residing in any municipality within the province, is infected, or lately before has been infected with, or exposed to any of the said diseases, the health officers or Local Board of Health of the municipality, where such person may be, may make effective provision in the manner which to them shall seem best for the public safety, by removing such person to a separate house, or by otherwise isolating him, if it can be done without danger to his health, and by providing nurses and other assistance and necessaries for him at his own cost and charge, or the cost of his parents or other person or persons liable for his support, if able to pay the same, otherwise at the cost and charge of the municipality.

54. Persons recovering from any of the said diseases, and nurses who have been in attendance on any person suffering from any such disease, shall not leave the premises till they have received from the attending physician, or Medical Health Officer, a certificate that in his opinion they have taken such precautions, as to their persons, clothing, and all other things which they propose bringing from the premises as are necessary to insure the immunity from infection of other persons with whom they may come in contact, nor shall any such person expose him or herself in any public place, shop, street, inn, or public conveyance without having first adopted such precautions.

Persons recovering from sickness, and nurses to take precautions against spread of disease.

55. All persons named in the last preceding clause shall be required to adopt for the disinfection and disposal of excreta, and for the disinfection of utensils, bedding, clothing and other things which have been exposed to infection, such measures as have been, or may hereafter be, advised by the Provincial Board of Health or by the Medical Health Officer, or such as may have been recommended by the attending physician as equally efficacious.

Measures necessary for disinfection to be adopted.

56. No person suffering from, or having very recently recovered from, small-pox, diphtheria, scarlet fever, cholera, measles, or other disease dangerous to public health shall expose himself, nor shall any person expose anyone under his charge who is so suffering, or who has recently recovered from any such disease, in any conveyance without having previously notified the owner or person in charge of such conveyance of the fact of his having or having recently had, such disease.

Notice to be given to person in charge of conveyance in certain cases.

57. The owner or person in charge of any such conveyance must not, after the entry of any so infected person into his conveyance, allow any other person to enter it without having sufficiently disinfected it under the direction of the Board of Health or the supervision of the Medical Health Officer, or Sanitary Inspector.

Conveyance to be disinfected.

58. No person shall give, lend, transmit, sell or expose any bedding, clothing or other article likely to convey any of the above diseases, without having first taken such precaution as the board may direct as necessary for removing all danger of communicating any such disease to others.

Precautions to be taken respecting clothing, etc.,

59. Any Local Board of Health may provide a proper place or portable furnace, with all necessary apparatus and attendance for the disinfection of bedding, clothing or other articles which have become infected, and may cause all such articles to be disinfected free of charge, or may make reasonable charges for the disinfecting of the same as may be provided by by-law.

Provision of means of disinfection.

60. Any Local Board of Health may direct the destruction of any bedding, clothing or other articles, which have been exposed to infection, and may give compensation for the same.

Destruction of infected bedding, etc.

61. No person shall let or hire any house or room in a house in which any of the diseases mentioned in section 46 have recently existed, without having caused the house and the premises used in connection therewith to be disinfected to the satisfaction of the health authorities; and for the purposes of this section the keeper of an inn or house for the reception of lodgers shall be deemed to let for hire part of a house, to any person admitted as a guest into such inn or house.

Houses or rooms occupied by sick persons to be disinfected before being let.

62. No person letting for hire or shewing for the purpose of letting for hire any house or part of a house, on being questioned by any person negotiating for the hire of such house or part of a house as to the fact of there previously having been therein any person suffering from any infectious disorder, or any animal or thing infected thereby, shall knowingly make a false answer to such questions.

Persons letting houses not to make false statements as to infectious diseases.

R. S. O. c. 191,
ss. 5-14, to
apply to towns
etc. Sec. 3
repealed.

63. The provisions of sections 5 to 14, inclusive, of *The Revised Statute respecting Vaccination and Inoculation*, are hereby extended to towns, incorporated villages, and townships; and section 3 of the said Act is hereby repealed.

Assistance by Constables, etc.

Officer if ob-
structed may
summon
assistance.

64. Any member of a legally constituted Board of Health, or any Medical Health Officer or Sanitary Inspector may, when obstructed in the performance of his duty, call to his assistance any constable or other person he thinks fit, and it shall be the duty of every such constable so called upon to render such assistance.

Penal Clauses.

Penalties.

65. (1) Every person violating sections 56, 57, 58, 61, or 62 of this Act shall be liable for every such offence to a penalty of not less than \$5 nor more than \$50 in the discretion of the convicting Justices or Magistrate, besides costs, which may also be inflicted if the convicting Justices or Magistrate see fit to impose the same.

(2) Any person who violates any other provision of this Act shall, unless it is otherwise specially provided, be liable for every such offence to a penalty not exceeding \$20, in the discretion of the convicting Justices or Magistrate, besides costs, which may also be inflicted if the convicting Justices or Magistrate see fit to impose the same.

Recovery of
penalties.

66. (1) Every such penalty and every other penalty specified in this Act may be recovered by any person before any two Justices or a Police Magistrate having jurisdiction in the Municipality, and shall be levied by distress and sale of the goods and chattels of the offender, with the cost of such distress and sale, by warrant under the hands and seals of the Justices, or the hand and seal of the Police Magistrate, before whom the same are recovered, or under the hands and seals of any other two Justices having jurisdiction in the municipality, and in default of sufficient distress the said Justices or Magistrate may commit the offender to the Common Gaol or to any Lock-up or House of Correction in the said municipality for any time not exceeding fourteen days unless the amount imposed is sooner paid.

(2) In case any person, from poverty or other sufficient cause, is unable to comply with the provisions of this Act or any of them, he shall give notice of such inability to the medical health officer or Secretary of the Local Board of Health, and in case the Local Board on examination is satisfied of the sufficiency of the cause of such inability, the Secretary thereof shall give his certificate to that effect, and such certificate shall be a bar to all proceedings against such person for the period of six months.

Application of
penalties.

67. Every penalty recovered under this Act shall be paid to the treasurer of the municipality in which the offence was committed, for the use of the Local Board of Health and subject to its disposition.

Proceedings
not to be
quashed for
want of form
or removed
into Superior
Courts.

68. No order or other proceeding, matter or thing, done or transacted in or relating to the execution of this Act shall be vacated, quashed or set aside for want of form, or be removed or removable by *certiorari* or other writ or process whatever into any of the Superior Courts, and no appeal shall be had to the General Sessions upon any conviction under this Act.

Application of
enactments in
Schedule A.

69. (1) The enactments contained in Schedule A, appended to this Act, shall after the first day of July next be in force in every Municipality in this

Province for which there is a Medical Health Officer and a Sanitary Inspector, as a by-law of such Municipality, as if enacted by the Council thereof, except in so far as they shall in the meantime or thereafter, be altered, amended, or repealed by the Council (Schedule B); and the Council of every local municipality shall have authority to pass by-laws from time to time in respect of the various matters dealt with by the said enactments.

(2) In any Municipality which has no Medical Health Officer and Sanitary Inspector, or has only one of these officers, the said enactments shall except as aforesaid, be in force unless so far as they relate to the officer which such Municipality does not possess.

(3) Where two or more Municipalities join in the appointment of a Health Officer or Sanitary Inspector, such officer or inspector shall be deemed to be the Health Officer or inspector of each of the said Municipalities.

(4) Where any act or omission is a violation of any express provision of this Act and is also a violation of a by-law of a Municipality in respect of a matter over which the Council of the Municipality has jurisdiction, a conviction may be had under either the Act or the by-law, but a second conviction shall not be made for the same act or omission.

SCHEDULE A.

Section 69.

BY-LAW IN FORCE IN EVERY MUNICIPALITY TILL ALTERED BY THE MUNICIPAL COUNCIL.

1. It shall be the duty of the Medical Health Officer to assist and advise the Board and its officers, in matters relating to public health, and to superintend, under the direction of the Board, the enforcement and observance, within this municipality, of Health By-laws or Regulations, and of Public Health Acts, and of any other Sanitary Laws, and, if thought advisable by the Board of School Trustees, to act as Medical Inspector of Schools, as well as advisory officer in matters pertaining to school hygiene, and to perform such other duties and lawful acts for the preservation of the public health, as may, in his opinion, be necessary, or as may be required by the Board of Health. He shall also present to this Board, before the fifteenth day of November in each year, a full report upon the sanitary condition of the district.

Duty of Medical Health Officer.

2. The Sanitary Inspector, besides performing the duties hereafter indicated by this By-law as belonging specially to him, shall assist the Medical Health Officer, and perform such other duties as may from time to time be assigned to him by the Board of Health or its Chairman.

Duty of Sanitary Inspector.

3. The Chairman of the Board of Health shall, before the first day of December in each year, present to the Municipal Council or Municipal Councils, comprised within this district, a report containing a detailed statement of the work of the Board during the year, and the report of the sanitary condition of the Municipality, as rendered to the Board by the Medical Health Officer. A copy of each such report shall be transmitted by the Secretary to the Secretary of the Provincial Board of Health.

Chairman of Board of Health to report to Council.

Deposits endangering public health forbidden.

4. No person shall within this Municipality suffer the accumulation upon his premises, or deposit, or permit the deposit, upon any lot belonging to him, of anything which may endanger the public health, or deposit upon, on, or into, any street, square, lane, by-way, wharf, dock, slip, lake, pond, bank, harbour, river, stream, sewer, or water, any manure or other refuse, or vegetable or animal matter, or other filth.

Duty of Sanitary Inspector as to lands, etc.

5. It shall be the duty of the Sanitary Inspector to keep a vigilant supervision over all streets, lanes, by-ways, lots, or premises, upon which any such accumulation as aforesaid may be found, and at once to notify the parties who own or occupy such lots or premises, or who either personally or through their employees, have deposited such manure, refuse, matter, dirt, or filth, in any street, lane, or by-way, to cleanse the same, and to remove what is found thereon; such parties shall forthwith remove the same, and if the same be not removed within twenty-four hours after such notification, the Inspector may prosecute the parties so offending, and he may also cause the same to be removed at the expense of the person or persons so offending. He shall also inspect at intervals, as directed by the Board of Health, all premises occupied by persons residing within its jurisdiction, and shall report to the Board each and every case of violation of any of the provisions of this By-law, or of any other regulations for the preservation of the public health, and shall also report every case of refusal to permit him to make such inspection.

Examination of buildings or premises by Sanitary Inspectors.

6. Whenever it shall appear to the Board, or to any of its officers, that it is necessary for the preservation of the public health, or for the abatement of anything dangerous to the public health, or whenever they or he shall have received a notice signed by one or more inhabitant householders of this municipality, stating the condition of any building in the municipality to be so filthy as to be dangerous to the public health, or that upon any premises in the municipality there is any foul or offensive ditch, gutter, drain, privy, cesspool, ashpit, or cellar, kept or constructed so as to be dangerous or injurious to the public health, or that upon any such premises an accumulation of dung, manure, offal, filth, refuse, stagnant water, or other matter, or thing, is kept so as to be dangerous or injurious as aforesaid, it shall be the duty of the Sanitary Inspector to enter such buildings or premises for the purpose of examining the same, and, if necessary, he shall order the removal of such matter or thing as aforesaid. If the occupant, or proprietor, or his lawful agent or representative, having charge or control of such premises, after having had twenty-four hours' notice from any such officer of the Board of Health to remove or abate such matter or thing as aforesaid, shall neglect or refuse to remove or abate the same, he shall be subject to the penalties imposed under section 18 of this by-law.

Notice to put premises in proper sanitary condition or to quit same.

7. If the Board is satisfied upon due examination, that a cellar, room, tenement, or building within its jurisdiction, occupied as a dwelling-place, has become by reason of the number of occupants, want of cleanliness, the existence therein of a contagious or infectious disease, or other cause, unfit for such purpose, or that it has become a nuisance, or in any way dangerous to the health of the occupants, or of the public, they may issue a notice in writing to such occupants, or any of them, requiring the said premises to be put in proper sanitary condition, or if they see fit, requiring the occupants to quit the premises within such time as the Board may deem reasonable. If the persons so notified, or any of them, neglect or refuse to comply with the terms of the notice, every person so offending shall be liable to the penalties imposed by section 18 of this by-law, and the Board may cause the premises to be properly cleansed at the expense of the owners or occupants, or may remove the occupants forcibly and close up the premises, and the same shall not again be occupied as a dwelling-place until put into proper sanitary condition.

8. No proprietor or tenant of any shop, house or outhouse, shall, nor shall any butcher or other person, use any such house, shop or outhouse at any time as a slaughter-house or for the purpose of slaughtering any animals therein, unless such shop, house or outhouse be distant not less than two hundred yards from any dwelling house and distant not less than seventy yards from any public street. Distance of slaughter-house, etc.

9. All slaughter-houses within this municipality shall be subject to regular inspection under the direction of the Board of Health; and no person shall keep any slaughter-house unless the permission in writing of the Board for the keeping of such slaughter-house has been first obtained, and remains unrevoked. Such permission shall be granted, after approval of such premises upon inspection, subject to the condition that the said houses shall be so kept as not to impair the health of persons residing in their vicinity, and upon such condition being broken the said permission may be revoked by the Board; and all animals to be slaughtered, and all fresh meat exposed for sale in this municipality shall be subject to like inspection. Inspection of slaughter-house.

10. All milch cows and cow byres and all dairies or other places in which milk is sold or kept for general use, and all cheese factories and creameries shall be subject to regular inspection under the direction of the said Board; and the proprietors shall be required to obtain permission in writing from the Board, to keep such dairy or other place in which milk is sold or kept as aforesaid, or to keep a cheese factory or creamery, and the same shall not be kept by anyone without such permission, which shall be granted after approval of such premises upon inspection, subject to the condition that all such places as aforesaid are so kept and conducted that the milk shall not contain any matter or thing liable to produce disease either by reason of adulteration, contamination with sewage, absorption of disease germs, infection of cows, or any other generally recognised cause, and upon such condition being broken the said permission may be revoked by the Board. Inspection of cow byres, cheese-factories and creameries.

11. No person shall offer for sale as food within this municipality any diseased animal, or any meat, fish, fruit, vegetables, milk, or other articles of food which, by reason of disease, adulteration, impurity, or any other cause shall be unfit for use. Sale of diseased food.

12. It shall be the duty of the owner of every house within this municipality to provide for the occupants of the same a sufficient supply of wholesome drinking water; and in case the occupant or occupants of any such house is or are not satisfied with the wholesomeness or sufficiency of such supply, he or they may apply to the Board of Health to determine as to the same; and if the supply be sufficient and wholesome, then the expenses incident to such determination shall be paid by the said occupant or occupants, and if not, then they shall be paid by the owner; and in either case the said charges shall be recoverable in the same manner as municipal taxes. Supply of drinking water.

13. All wells in this municipality which are in use, whether such wells are public or private, shall be cleaned out before the 1st day of July in each year, and in case the Board of Health certifies that any well should be filled up, such well shall be forthwith filled up by the owner of the premises. Wells to be cleaned out, etc.

14. The following code of rules and regulations for the disposal of sewage and refuse shall constitute a part of this by-law, and any person or persons violating or neglecting any of the said rules and regulations shall be liable to the fines and penalties imposed by section 18 of this by-law. Rules respecting disposal of sewage and refuse.

Details of establishment of privy vaults, etc., to be approved by Medical Health Officer.

RULE 1.—No privy-vault, cesspool or reservoir into which a privy, water-closet, stable or sink is drained, shall be established until the details of such establishment shall have been submitted to and obtained the approval in writing of the Medical Health Officer, who shall, from time to time, determine with the approbation of the Board, the method of disposal of excreta, sewage and other refuse, to be adopted within the district.

Time deposits to be removed.

RULE 2.—Earth privies or earth closets without a vault below the surface of the ground do not come within Rule 1, but sufficient dry earth, wood-ashes or coal ashes to absorb all the fluid parts of the deposit must be thrown upon the contents of such earth privies and closets daily, the contents when removed from the closet must be placed in a shed or box with rain-proof cover, and removed from the premises at least once a year on or before the fifteenth day of May.

Cleaning out and disinfecting privy vaults, etc.

RULE 3.—If the exigencies or circumstances of the municipality require that privy-vaults, cesspools or reservoirs shall be allowed in accordance with Rule 1, they shall be cleaned out at least once a year, on or before the fifteenth day of May, and from the fifteenth day of May to the first day of November in each year they shall be thoroughly disinfected by adding to the contents of the vault, cesspool or reservoir, once a month, not less than two pounds of sulphate of copper, dissolved in two pailfuls of water, or other suitable disinfectant.

Deodorization before removal.

RULE 4.—Within the limits of this municipality no night-soil or contents of any cesspool shall be removed unless previously deodorized as above, and during its transportation the material shall be covered with a layer of fresh earth, except the removal shall have been by some "Odorless Excavating Process."

Time for removal of decayed animal or vegetable matter.

RULE 5.—All putrid and decaying animal or vegetable matter must be removed from all cellars, buildings, out-buildings and yards on or before the fifteenth day of May in each year.

Time for removal of garbage.

RULE 6.—Every householder and every hotel and restaurant-keeper or other person shall dispose of all garbage, for the disposal of which he is responsible, either by burning the same or by placing it in a proper covered receptacle for swill and house offal, the contents of which shall, between the fifteenth day of May and the first day of November, be regularly removed as often as twice a week.

Hogs.

RULE 7.—Between the fifteenth day of May and the first day of November, no hog shall be kept within the limits of this municipality, except in pens seventy feet from any house, with floors kept free from standing water, and regularly cleansed and disinfected.

Livery stable.

RULE 8.—The keeper of every livery or other stable shall keep his stable and stable-yard clean, and shall not permit, between the fifteenth day of May and the first day of November, more than two waggon-loads of manure to accumulate in or near the same at any one time, except by permission of the Board of Health.

15. The following regulations regarding the construction of houses, shall be in force within this municipality :—

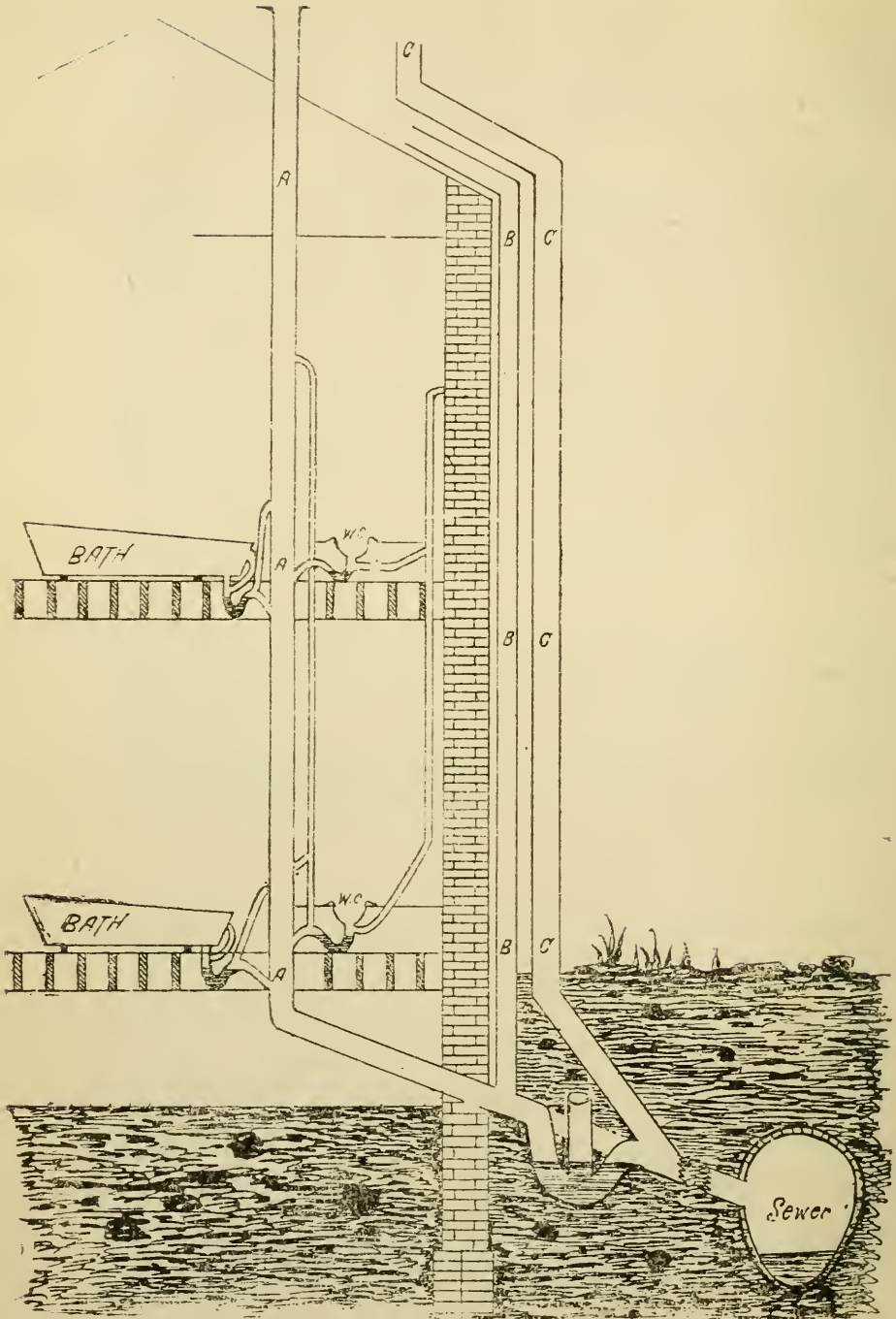
RULE 1.—No house shall be built in or upon any site, the soil of which has been made up of any refuse, unless such soil shall have been removed from such site, and the site disinfected, or unless the said soil shall have been covered with a layer of charcoal, covered by a layer of concrete at least six inches thick and of such additional thickness as may be requisite under the circumstances to prevent the escape of gases into such proposed house. Soil of building sites to be disinfected.

RULE 2.—The drain of every house which may be connected with a sewer or cesspool shall be ventilated by means of a pipe extending upward from the highest point of the main soil or waste-pipe, and also by a pipe carried upward from the drain outside the walls of the house according to the principles shewn in the appended diagram. These pipes shall be of the same dimensions as the said main soil or waste-pipe, and shall be constructed of the same material or of stout galvanized iron, and no trap shall intervene between the said ventilating pipes. In case a trap shall intervene between the sewer or cesspool, and the ventilating pipes already described, then a four-inch ventilating pipe of the same material as above described shall be carried from a point between such trap and the sewer. All such ventilating pipes shall be carried above the roof of the said house, and shall open above at points sufficiently remote from every window, door, sky-light, chimney or other opening leading into any house. Ventilation of drains, etc.

No pipe carrying air or gas from any drain or soil-pipe shall be connected with any chimney in a dwelling-house, unless the same be a furnace chimney used exclusively for the purpose of ventilating such soil-pipe or drain.

RULE 3.—Every house-drain shall be constructed of vitrified earthenware or iron pipe; and every soil and waste-pipe, of iron pipe rendered impervious to gas or liquids, the joints thereof being run with lead and caulked, or of lead pipe weighing at least 6 lbs. to the square foot; and the waste pipe from every closet, sink, tub, wash-basin, safe or other service shall have as near as may be to the point of junction with such service a trap so constructed, vented and furnished, that it shall at no time allow of the passage of gas into such house. All joints shall be so constructed as to prevent gas escaping through them. Description of drain pipes.

DIAGRAM.



A—Extension upwards of soil pipe.

B—Second ventilating tube.

C—Ventilator for drain in case a trap is placed between the sewer and house.

RULE 4.—The construction of any closet or other convenience which shall allow of the escape into the house of air or gas which has been confined in any part of it, or from the drain or soil pipe, is hereby prohibited. Certain closets* prohibited.

RULE 5.—No refrigerator waste shall be allowed to connect with any drain. Refrigerator waste.

RULE 6.—No pipe supplying water directly to a water-closet or urinal shall be connected with the pipe supplying water for drinking purposes. Pipes supplying water to closets to be disconnected with other pipes.

16. Every person who erects or causes to be erected any building shall, within two weeks of the completion thereof, deposit in the Registry Office of the Registry Division in which the building is situated, plans of the drainage and plumbing of the same as executed; and in the case of any alteration of any such plumbing or drainage, it shall be the duty of the owner of the house, within two weeks of the making of the alteration, to deposit in the same manner the plan and record of any such alteration; if such alteration is made by a tenant, it shall be the duty of the tenant or lessee to deposit or cause to be deposited the plan and record of such alteration.

17. The following rules for preventing the spread of infectious and contagious diseases shall constitute a part of this By-law :— Rules respecting infectious and contagious diseases.

RULE 1.—The Medical Health Officer [or Secretary of the Local Board of Health] shall provide each medical practitioner, practising within this municipality, with blank forms on which to report to the said Medical Health Officer [or Secretary] any case of diphtheria, small-pox, scarlet fever, cholera, typhoid fever, measles, whooping-cough or other disease dangerous to the public health; and also, with other blank forms on which to report death or recovery from any such disease. Duties of medical health officer.

RULE 2.—All such forms shall be so printed, gummed and folded that they may be readily sealed, without the use of an envelope, so as to keep them from perusal until opened by the Medical Health Officer [or Secretary]. Forms, kind of

RULE 3.—Said blanks shall be in accordance with the following forms :—

Report of Infectious Disease.

Christian name and surname of patient :

Age of patient :

Locality (giving street, number of house or lot) where patient is :

Name of disease :

Name of school attended by children from that house :

Measures employed for isolation and disinfection :

(Signature of physician) :

.....

Report of Death or Recovery from Infectious Disease.

Christian name and surname of patient :

Locality (giving street, number of house or lot) where patient is :

Name of disease :

How long sick :

Whether dead or recovered :

Means of disinfection employed, and when employed :

(Signature of physician) :

.....

Notice of
disease to be
posted up.

RULE 4.—The Medical Health Officer [or Secretary], within six hours after he shall have received a notice of the existence of scarlet fever, diphtheria, small-pox, cholera, or whooping-cough, in any house, shall affix or cause to be affixed by the head of the household, or by some other person, near the entrance of such house a card at least nine inches wide and twelve inches long, stating that such disease exists in the said house, and stating the penalty for removal of such card without the permission of the Medical Health Officer or Board of Health.

Not to be
removed.

RULE 5.—No person shall remove such card without the permission of the Board of Health or one of its officers.

Animals
affected.

RULE 6.—No animal infected with an infectious or contagious disease shall be brought or kept within this municipality, except by permission of the Board of Health.

Penalties.

18. Any person who violates sections 4, 6, 7, 9, or 11 of this by-law, or Rule 1 of section 15, or Rule 5 or 6 of section 17, shall be liable for every such offence to a penalty of not less than \$5 nor more than \$50 in the discretion of the convicting Justices or Magistrate, besides costs, which may also be inflicted if the committing Justices or Magistrate see fit to impose the same. Any person who violates any other provision of this by-law shall be liable for every such offence to a penalty not exceeding \$20, in the discretion of the convicting Justices or Magistrate, besides costs, which may also be inflicted if the convicting Justices or Magistrate see fit to impose the same. Every such penalty may be recovered by any person before any two Justices or a Police Magistrate having jurisdiction in the municipality, and shall be levied by distress and sale of the goods and chattels of the offender, with the costs of such distress and sale, by warrant under the hands and seals of the Justices, or the hand and seal of the Police Magistrate before whom the same are recovered, or under the hands and seals of any other two Justices having jurisdiction in the municipality, and in default of sufficient distress the said Justices or Magistrate may commit the offender to the common gaol or to any lock-up or house of correction in the said municipality for any time not exceeding fourteen days, with or without hard labour, unless the amount imposed be sooner paid.

SCHEDULE B.

FORM OF MUNICIPAL BY-LAW AMENDING THE ABOVE BY-LAW.

By-law Number —, intituled "A By-law respecting the Public Health By-law."

Whereas it is expedient to amend or repeal some of the provisions of the by-law appended to *The Public Health Act, 1884*, so far as the same are in force in this municipality, and to suspend the operation of other provisions of the said by-law.

Be it therefore enacted by the Municipal Council of

1. Section 13 of the said by-law is hereby amended by substituting the "first day of July of every second year" for "the first day of July in each year."

2. Rule 7 of section 14 of the said by-law is amended by striking out the words "and disinfected" at the end of the said rule.

3. Rule 2 of section 15 shall not be in force in this municipality until the First day of January, 1885.

4. Rule 3 of section 14 is hereby repealed.

5. This by-law shall go into force forthwith.

AN ACT TO MAKE FURTHER PROVISION REGARDING THE PUBLIC HEALTH.

Chapter 45 (1885).

HER MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows :

1. This Act may be cited as *The Public Health Act, 1885.*

Short title.

2. Whenever, from the presence of any formidable contagious disease in any locality, the Provincial Board of Health considers the appointment of a Medical Health Officer necessary for the municipality in which such disease exists, or for any neighbouring municipality, and requests the council of any such municipality to appoint a Medical Health Officer, the council shall forthwith appoint a properly qualified medical practitioner, to be Medical Health Officer for the municipality.

Appointment of Medical Health Officer by municipal councils.

3. If a council does not appoint a Medical Health Officer, within five days after a request in that behalf made by the Provincial Board, which request may be served upon the head of the council or its clerk, or mailed to either of such officers by registered letter-post, the Lieutenant-Governor upon the recommendation of the Provincial Board may appoint a Medical Health Officer for such municipality.

By Provincial Board.

4. Every Medical Health Officer appointed by the Municipal Council shall hold office during the pleasure of the council, and if under the preceding section the Medical Health Officer is appointed by the Lieutenant-Governor, he shall hold office until the first day of February in the year following that in which he is appointed ; Provided always, that the municipal council may at any time, upon a two-thirds vote of its members, dismiss any Medical Health Officer for a neglect of duty ; and the decision of such council shall be final and shall not render the corporation liable for any damages ; the Medical Health Officer shall be entitled to compensation for services actually rendered up to the time of such dismissal, but the amount of such compensation shall not exceed the salary he would have earned up to the time of such dismissal, and if his salary up to such time is paid such payment shall be a bar to any other claim for services rendered.

Duration of office.

Compensation in case of dismissal.

5. Whenever, during the presence of any formidable contagious disease in any municipality or neighbouring locality any Medical Health Officer becomes temporarily or permanently incapable of performing his duties, or resigns his office, or leaves the locality for which he has been appointed, the council shall forthwith appoint another Medical Health Officer in his room.

Vacancy in office, how filled.

6. Where two or more municipalities are united into a health district, the provisions of the preceding part of this Act shall apply, except that the power and duty of appointing or removing a Medical Health Officer shall be with the District Board of Health, unless the councils of the municipalities

Case of several municipalities united into one health district.

composing such health district have, previous to any request in that behalf being made by the Provincial Board, united in appointing a Medical Health Officer for such municipalities, and the Lieutenant-Governor may, in case of their default, appoint a Medical Health Officer for such district.

Compensation
of Medical
Health Officer.

7. In case the appointment of a Medical Health Officer is made by the Provincial Board of Health he shall be entitled to recover from the municipality reasonable compensation for his services.

His powers.

8. Where a Medical Health Officer is appointed he shall possess all the powers and authority possessed by any Health Officer or Sanitary Inspector under *The Public Health Act, 1884*, or any other Act in force, and such Medical Health Officer shall perform all duties imposed upon him by any regulations of the Provincial Board of Health, and the fact that similar duties are by statute imposed upon the Local Board of Health shall not relieve the Medical Health Officer from the performance of such duties.

Suspension of
municipal and
school
elections.

9. (1) In case the Provincial Board of Health reports to the Lieutenant-Governor that on account of the presence in any municipality of an epidemic or contagious disease it would be dangerous to hold an election in such municipality, the Lieutenant-Governor may, upon application by the council of the municipality in that behalf, issue his proclamation postponing the holding of any intended municipal or school election for a period not exceeding three months, and may from time to time further postpone such election if in the opinion of the said board the necessity for postponement continues.

(2) The Lieutenant-Governor may, by his said proclamation, name the days for holding the nomination and polling for the election, but in case no days are named therefor, the council shall, as soon as practicable after the period named in such proclamation, or the last of such proclamations, expires, by by-law name days for the nomination and polling.

(3) In case an election postponed under the provisions of this section is the annual election, or an election of the entire council, or of all the members of a board of trustees or other body, the members of the council, board or other body shall continue to hold office until their successors are elected.

Authority to
dispose of
refuse, etc.,
after removal.

10. Where, under the provisions of *The Public Health Act, 1884*, or of any municipal by-law, the Local Board or any Health Officer removes any dirt, filth, refuse, debris, or other thing which is likely to endanger the public health or to become or cause a nuisance, or which is, or is causing, a nuisance, such dirt, filth, refuse, or other thing shall be subject to the disposition of the Local Board or, if the officer is acting under a by-law of a municipal council, shall be subject to the disposition of the council, and the owner of such thing shall have no claim in respect thereof.

Powers for
purpose of
disinfecting
things or per-
sons.

11. Where a Local Board of Health, or any Health Officer, is required or empowered, under any Public Health Act, or under any regulations made thereunder, to disinfect any person or thing, or to isolate any person, such board or officer may use such force and employ such assistance as is necessary in order to accomplish what is required.

47 V., c. 38. s.
3, amended.

12. Section 3 of *The Public Health Act, 1884*, is hereby amended by adding the following thereto as sub-sections 9, 10, 11 and 12.

Inspection of
railway
stations,
steamboats,
etc.

(9) For the inspection of railway stations, steamboats, vessels, railway carriages and cars and public conveyances by the Local Board or some officer, and the cleansing, purifying and disinfecting thereof, and anything contained therein when required by such board or officer at the expense of the owner,

occupier, or the person having the care and ordering thereof, and for detaining for this purpose any such steamboat, vessel, railway carriage and car or public conveyance, and anything contained therein, so long as may be necessary, and any person travelling thereby.

(10) For preventing the departure of persons from infected localities, and for preventing persons or conveyances from passing from one locality to another, and for detaining persons or conveyances who or which have been exposed to infection, for inspection or disinfection until the danger of infection is passed. Restraining departure of persons and conveyances.

(11) For requiring the appointment of sanitary police to be paid by the municipalities in which they act, for the purpose of assisting and carrying out the health regulations in force in the municipality. Sanitary police.

(12) For the removal of persons living in infected localities, Removal of persons.

13. Section 8 of the said Act is hereby amended by inserting after the words "Local Boards of Health," where these words occur in the said section, the words "or by the Medical Health Officer or sanitary police." 47 V., c. 38, s. 8, amended.

14. Section 9 of the said Act is hereby amended by inserting after the words "the Local Boards of Health," the words, "or the Provincial Board of Health." Sec. 9, amended.

15. Section 65 of the said Act is hereby amended by adding thereto the following additional sub-sections, as sub-sections 2, 3 and 4. Sec. 65, amended.

(2) Any person who violates any regulation of the Provincial Board of Health shall be liable for every such offence to a penalty not exceeding \$20 in the discretion of the convicting justices or magistrate, besides costs which may also be inflicted, if the convicting justices or magistrate see fit to impose the same. Penalty for violating regulations of Provincial Board of Health.

(3) Where any person has been convicted of an offence under this Act, or under any regulation or by-law enacted or in force thereunder, and such offence is in the nature of an omission or neglect, or is in respect of the existence of a nuisance or other unsanitary condition, which it is such person's duty to remove, or is in respect of the erection or construction of anything contrary to the provisions of this Act, or of *The Public Health Act, 1882*, or of any regulation or by-law enacted, or in force under either of the said Acts then, in case the proper authority in that behalf gives reasonable notice to such person to make good such omission or neglect, or to remove such nuisance or unsanitary condition, or to remove the thing which has been erected or constructed contrary to the said Act, regulation or by-law, and default is made in respect thereto, the person offending may be convicted for such default, and shall be liable to the same punishment as was, or might have been, imposed for the original offence, and so on, from time to time, as often as after another conviction a new notice is given and the default continues; and in the case of a third or subsequent conviction, it shall not be necessary in the information, conviction or other proceedings to make any reference to any conviction except the first, or to any notice except that in respect of which the proceedings are then being taken. Removal of nuisances.

(4) No determination or order of the Provincial or Local Board of Health for the removal or abatement of any nuisance shall be enforced, except by order of the High Court of Justice, where such removal or abatement involves the loss or destruction of property of the value of \$2,000 or upwards, and upon any application to the High Court the order of the Provincial or Local Board shall not be evidence that the matter or thing complained of was or is in fact a nuisance. Where application in respect of nuisance must be made to High Court.

ARTICLE II.

SUMMARY OF MINUTES FOR 1884.

FIRST REGULAR MEETING OF THE BOARD.

(First Session.)

WEDNESDAY, FEBRUARY 6th, 1884.

The Board met at 2 p.m., all the members being present.

The minutes of the last meeting having been read and confirmed, various communications were read, action concerning which having been taken, it was moved by Dr. Oldright, seconded by Dr. Rae, and carried: That the Board go into Committee of the Whole on the report of the Legislative Committee. The Committee rose at 6 p.m. and reported progress, asking leave to sit again.

The Board then adjourned till Thursday, at 10 a.m.

(Confirmed)

WM. OLDRIGHT,

Chairman.

(Second Session.)

The Board met at 10 a.m., all the members being present, with the exception of Prof. Galbraith.

It was moved by Dr. Cassidy, seconded by Dr. Covernton, and carried: That a special Committee composed of Drs. Oldright, Covernton, Cassidy, Yeomans and Rae, be appointed to prepare the work on School Hygiene, indicated in a communication sent to the Board by the Provincial Minister of Education. By resolution the Board then went into Committee of the Whole on the report of the Committee on Legislation, when, after making amendments to the report, it was moved by Dr. Cassidy, seconded by Dr. Yeomans, and carried: That the report as amended, be received and adopted.

The Board then adjourned till 2 p.m. Friday, the 8th.

(Confirmed)

WM. OLDRIGHT,

Chairman.

(Third Session.)

FRIDAY, 8TH FEBRUARY, 1884.

The Board met at 2.30 p.m., the only member absent being Prof. Galbraith.

After the reading of the minutes of the previous session and the consideration of several communications, it was moved by Dr. Rae, seconded by Dr. Yeomans: That a sum not exceeding \$50 be devoted to the purpose of defraying the expense connected with a partial course of additional lectures on sanitary subjects in connection with the Canadian Institute—if the proposition meet the approval of the latter body. The motion was carried.

The matter of continuing the weekly disease reports having been considered and discussed, it was moved by Dr. Rae, seconded by Dr. Covernton: That the Publication Committee be requested to consider and report the best means of curtailing the expenses connected with the publication of the Weekly Health Bulletin. The motion was carried.

Thereafter, on motion, it was agreed that copies of all resolutions passed by the London Sanitary Convention, and by the Bathurst and Rideau Medical Association, be transmitted to the Provincial Treasurer, by the Secretary.

The report of the Commission to investigate Typhoid Fever in Luther Village was read and adopted, on motion of Dr. Yeomans, seconded by Dr. Covernton.

After discussion on the bill to be submitted to the Legislative Assembly by the Toronto Tenement Building Association, it was moved by Dr. Cassidy, seconded by Dr. Yeomans, and carried: That the Committee on "Sewage," "Ventilation," and "Contagious Diseases," be a special committee to report at the next meeting of the Board, upon the communication which has been received from the Toronto Tenement Building Association.

The meeting then adjourned to the call of the chair.

(Confirmed) WM. OLDRIGHT,
Chairman.

SPECIAL MEETING OF THE BOARD.

(First Session.)

TUESDAY, MARCH 5th, 1884.

The Board met at 11.30 a.m., all members being in their seats but Prof. Galbraith.

The minutes of the last meeting were read and confirmed, out of which various matters arose which occupied the Board throughout the entire Session, when the Board adjourned till Wednesday, at 10 a.m.

(Confirmed) WM. OLDRIGHT,
Chairman.

(Second Session.)

WEDNESDAY, MARCH 6th, 1884.

The Board met at 10.30 a.m., all the members being present, as at the first session.

After dealing with communications to the Board, the report of the Publishing Committee was read, and was adopted on motion of Dr. Rae, seconded by Dr. Yeomans, as follows: That the report of the Publishing Committee be received and adopted; and that the Secretary be requested to prepare a scheme for the Monthly Disease reports, and submit it to the Publishing Committee to take action thereon.

The report of the Committee on the Toronto Tenement Building Association was read, and on motion adopted.

Motions were thereafter passed, adopting as read the reports of the Commission of investigation into Malaria along the valley of the lower Grand River, and of the Committee appointed to arrange for and attend the Sanitary Convention at London.

The Board then adjourned till 3 p.m. Wednesday.

CHARLES WM. COVERNTON,
Chairman.

(Third Session.)

WEDNESDAY, MARCH 6th, 1884.

The Board met at 3 p.m., and after the reading of the minutes of the previous session, the report of the delegates to the American Public Health Association, in November, was read and adopted.

The report of the Secretary on the Doncaster and Leslieville Fat Rendering establishments of the Messrs. Hallett, and of the Messrs. Harris, was read and adopted, and ordered to be printed in the Annual Report, on motion of Dr. Yeomans, seconded by Dr. Covernton.

Dr. Oldright presented the report on the Richmond Hill Knackery nuisance, and on motion of Dr. Yeomans, seconded by Dr. Cassidy, it was ordered to be printed in the Annual Report.

The following resolution of condolence was moved by Dr. Oldright, Chairman, seconded by Dr. Covernton, and carried :—

“That the Board has heard with deep regret of the death of Dr. Elisha Harris, Secretary of the State Board of Health of New York. In common with all who have watched the progress of sanitary science on this continent and elsewhere, it is painfully sensible of the loss that has been sustained in the demise of this eminent sanitarian ; and this feeling is increased by the recollection of acts of personal kindness and assistance extended by him to the delegates of this Board, who visited Albany two years ago.”

The resolution also directed that a copy of it be transmitted to the Secretary, or Acting Secretary, of the State Board of Health, with a request that he forward copies to the family of the late Dr. Harris, and to any journals in the State that he may think fit.

The report of the Finance Committee was presented by Dr. Rae, and was, on his motion, seconded by Dr. Cassidy, adopted.

The meeting then adjourned.

CHARLES WM. COVERNTON,
Chairman.

SECOND REGULAR MEETING, 1884—THE ANNUAL MEETING.

(First Session.)

MAY 30th, 1884.

The Board met at 11 a.m., the following members being present :—

Dr. Covernton, Chairman ; Dr. Cassidy, Dr. Rae, Prof. Galbraith, and Dr. P. H. Bryce.

The minutes of the previous meeting having been read and confirmed, the Chairman proceeded to read his Annual Address, which, on motion of Dr. Cassidy, seconded by Dr. Rae, was adopted.

A large number of communications were then read and disposed of in regular form.

An Order in Council, appointing the following gentlemen members of the Board for three years, from May 1st, 1884, was read :—

Dr. W. Oldright, Toronto ; Dr. Francis Rae, Oshawa ; Prof. J. Galbraith, Toronto ; and Dr. Peter H. Bryce, Secretary, Toronto.

The reading of numerous communications occupied the attention of the Board till it adjourned to meet at 2.30 p.m.

(Second Session.)

MAY 30th, 1884.

The Board met at 2.30 p.m., all the members being present except Dr. Oldright.

After reading other communications, the following motion was carried relative to the publication of the Monthly Health Bulletin :—

Moved by Dr. Rae, seconded by Dr. Cassidy : That the details connected with the Health Bulletin be referred to the Publication Committee and the Secretary, with power to act in the matter.

The Committee on Epidemics presented their report on the recent outbreak of small pox, after the reading of which the Secretary gave important additional verbal information concerning the various cases. A motion then followed, adopting the report as read, and recommending that the Minister of the Department be consulted regarding the proposed action to be taken in the matter. Carried.

Various other matters were then discussed, after which the Board adjourned till 10.30 a.m., Saturday.

(Third Session.)

SATURDAY, MAY 31st, 1884.

The Board met at 10.30 a.m., the following members being present :—

Dr. Covernton, Chairman; Dr. Cassidy, Dr. Yeomans, Dr. Rae, Prof. Galbraith and Dr. Bryce.

After reading the minutes of the previous session, the Secretary read various communications.

The Committee on School Hygiene handed in their report, *re* ventilation of proposed High School at Dunnville, which was read and adopted; and, on motion, Dr. Cassidy was appointed a Committee on Ventilation to take charge of the matter, with instructions to report to the Board.

The Secretary then read the report of the investigation into the outbreak of Diphtheria at Smith's Falls during the past winter. On motion of Dr. Yeomans, seconded by Dr. Rae, the report was adopted.

The Secretary having introduced the matter, the following motion, moved by Dr. Yeomans, seconded by Prof. Galbraith, was carried: That the Publication Committee be authorized to arrange for sending to each municipality a specimen blank book for reports, as is required by Sanitary Inspectors for reporting to Local Boards.

It was thereafter moved by Dr. Cassidy, seconded by Dr. Rae: That the Secretary be requested to prepare a circular for notifying Boards whose Secretaries have neglected to report the formation of Local Boards of Health. Carried.

Dr. Cassidy having suggested the propriety of the Board's supplying the Committee on Ventilation with certain instruments for its use, it was moved by Dr. Yeomans, seconded by Dr. Cassidy, and carried: That the Committee on Ventilation be authorized to expend a sum not exceeding \$50 in procuring such instruments as may be necessary for the purposes of the Committee.

Discussion having taken place on the drawing up of a specification for the use of municipalities in adopting a system for the dry removal of sewage, it was moved by Prof. Galbraith, seconded by Dr. Bryce, and carried: That this Board prepare a specimen specification for a system of dry removal, adapted to the circumstances of small towns; and that Dr. Bryce be associated with the Committee on Sewage for preparing such specification.

The Board then adjourned till 2.30 p.m.

(Fourth Session.)

MAY 31st, 1884.

The Board met at 2.30 p.m., all the members being present except Dr. Oldright.

The reading of the minutes was postponed.

The question of Immigrant Inspection again having been introduced, it was decided that the Secretary communicate with Dr. Taché and the managers of the various railways, concerning the establishment of some comprehensive system for preventing the introduction of infectious diseases by immigrants.

The report of the Finance Committee was then presented, and, on motion of Dr. Rae, seconded by Dr. Cassidy, it was adopted.

The members of the various Standing Committees for the year were appointed on motion of Dr. Rae, seconded by Dr. Yeomans, as follows:—

1. Epidemics: Drs. Covernton and Bryce.
2. Sewage and Water Supply: Dr. Oldright and Prof. Galbraith.
3. Foods, Drinks and Adulterations: Dr. Bryce.
4. Heating and Ventilation of Buildings: Dr. Cassidy.
5. Poisons: Dr. Rae.
6. School Hygiene: Dr. Yeomans.
7. Legislation: Dr. Bryce.
8. Finance: Dr. Rae.
9. Publication: Drs. Covernton, Oldright and Cassidy.

The Board then concluded its session, adjourning to re-assemble at the call of the Chair.

CHARLES WM. COVERNTON,
Chairman.

THIRD REGULAR MEETING OF THE BOARD.

(First Session.)

JULY 31st, 1884.

The Board met at 2.30 p.m., the following members being present, Drs. Covernton, Cassidy, Yeomans, Bryce and Oldright.

The Chairman having explained why the Board had been called together at an earlier period than usual, the Secretary read the minutes of last meeting, which were confirmed on motion of Dr. Cassidy, seconded by Dr. Yeomans.

A large number of communications were then read, many of them having reference to the sawdust nuisance, and in reply to the Board's circular on the subject, dated July 24th. After giving the matter due consideration, the Board took up the reports of Standing Committees, when Dr. Bryce read a partial report of the Committee on Epidemics. The partial report having been received, the Board adjourned till 8 p.m.

CHARLES WM. COVERNTON,
Chairman.

(Second Session.)

JULY 31st, 1884.

The Board resumed its labours at 8 p.m., there being present: Drs. Covernton, Oldright, Yeomans, Cassidy and Bryce.

The minutes of last session having been read, the reports from Standing Committees were taken up, when Dr. Covernton read the completed report of the Committee on Epidemics, which was adopted on motion of Dr. Cassidy, seconded by Dr. Yeomans.

It was then moved by Dr. Oldright, seconded by Dr. Yeomans, and carried: That the Chairman and Secretary write a letter to the manager of each of the lines of railway passing through the Province, pointing out the necessity of adopting dry earth closets in order to prevent the spread of the infection of Typhoid Fever, Cholera and other diseases from excreta scattered along the track; also, pointing out the feasibility of such a change.

After further formal discussion on measures necessary to be adopted to provide against the advent of Cholera, the Board adjourned, on motion of Dr. Cassidy, seconded by Dr. Yeomans, till 10.30 a.m., August 1st.

CHARLES WM. COVERNTON,
Chairman.

(Third Session.)

AUGUST 1st, 1884.

The Board met at 10.30 a.m., the following members being present: Drs. Covernton, Cassidy, Yeomans, Bryce and Oldright.

A number of communications having been read, the Board, on motion of Dr. Bryce, seconded by Dr. Yeomans, went into Committee of the Whole to consider resolutions prepared by the Committee on Epidemics, *re* protection against Cholera.

The Committee arose at 1 p.m. and reported progress.

The Board then adjourned till 2 p.m.

CHARLES WM. COVERNTON,
Chairman.

(Fourth Session.)

AUGUST 1st, 1884.

The Board met at 2 p.m., there being present: Dr. Covernton, Dr. Oldright, Dr. Yeomans, Dr. Bryce and Dr. Cassidy.

The minutes of the previous session having been read, the Board again went into Committee of the Whole on the Cholera resolutions, and after receiving further consideration they were reported to the Board and adopted, Regulation 10 being inserted as an amendment, on motion of Dr. Bryce, seconded by Dr. Cassidy.

Reports of Special Committees were next considered, when Dr. Oldright presented the report of the Special Committee appointed to enquire into the prevalence of Typhoid at Kingston Asylum, which was received.

It was thereafter moved by Dr. Cassidy, seconded by Dr. Yeomans, and carried: That a Committee, consisting of Drs. Covernton, Bryce and the mover, be appointed to discuss the desirability of measures being taken to prevent infanticide, and suggest means by which the present large mortality among foundlings in this Province be diminished; and that the Committee report at the next meeting.

Subsequently it was moved by Dr. Yeomans, seconded by Dr. Cassidy, and carried: That in the matter of the nuisance complained of by Mr. W. Pruest, of Haliburton, the Chairman and Secretary be authorized to take such measures as will give support to the Local Board of Health, in having the nuisance abated.

The Board then adjourned till 8 p.m.

CHARLES WM. COVERNTON,
Chairman.

(Fifth Session.)

AUGUST 1st, 1884.

The Board met at 8.30 p.m., the members present being: Dr. Oldright, Dr. Cassidy, Dr. Yeomans and Dr. Bryce.

It was moved by Dr. Oldright, seconded by Dr. Bryce, and carried: That in the case of those municipalities in which it is necessary for the general welfare of the Province, in view of the probable approach of Cholera and because of other Zymotic diseases, there should be active Boards of Health and in which no Boards have been appointed, the Secretary be instructed to write to the Municipal Clerks of such municipalities, drawing their attention to the necessity above referred to, and informing them that unless Boards are forthwith appointed, the Provincial Board will proceed to make appointments under section 19 of the *Public Health Act*, 1884, in all such municipalities.

The report of the Committee on Sewage was thereafter read and adopted, on motion of Dr. Cassidy, seconded by Dr. Bryce.

The Board then adjourned till 10.30 a.m., August 2nd.

CHARLES WM. COVERNTON,
Chairman.

(Sixth Session.)

AUGUST 2nd, 1884.

The Board met at 10.30 a.m., all the members being present except Prof. Galbraith and Dr. Rae.

A large number of communications, some of which concerned nuisances complained of and others regarding the organization and work of Local Boards of Health, were read.

Resolutions were passed by the Board appointing delegates to attend the Sanitary Conference to be held at Washington, August 7th, and the meeting of the Canadian Sanitary Association at Montreal; and that the gentlemen, delegates to the Sanitary Association, act as delegates to the meeting of the British Association.

Dr. Oldright moved, seconded by Dr. Yeomans : That the Chairman be appointed delegate to the meeting of the American Public Health Association to meet in St. Louis in October next, and that he be also empowered to appoint his co-delegate. Carried.

After discussion of the report on the Kingston Asylum, it was moved by Dr. Cassidy, seconded by Dr. Yeomans, and carried : That the report of the Special Committee on the Sanitary condition of the Kingston Asylum be adopted : and that a copy of the report be transmitted to the Provincial Secretary, through the Inspector.

The meeting then adjourned.

CHARLES WM. COVERNTON,
Chairman.

FOURTH REGULAR MEETING OF THE BOARD.

(First Session.)

NOVEMBER 25th, 1884.

The Board met at 2 p.m., the following members being present : Drs. Covernton, Oldright, Rae, Cassidy, Yeomans and Bryce.

The minutes of the last quarterly meeting were read by the Secretary and, after slight amendment, were confirmed.

The numerous communications having been dealt with, the Secretary presented his quarterly statement of business transacted by the Board, and read some of the fullest reports from Local Boards of work done during the year.

Reports of Standing Committees were then taken up, when Dr. Yeomans read the report of the Committee on School Hygiene. It was moved by Dr. Oldright, seconded by Dr. Rae, and carried : That the report be received and adopted, and that a copy of it be made and sent to the Minister of Education.

The session adjourned till 10.30 a.m., Nov. 26th.

(Second Session.)

NOVEMBER 26th, 1884.

The Board met at 10.30 a.m., the following members being present :

Drs. Covernton, Oldright, Cassidy, Yeomans, and Bryce.

The minutes of last session were read, together with numerous communications from Local Boards of Health.

The Secretary introduced to the members of the Board, Mr. Symington, of Hamilton, who appeared for the purpose of explaining his system of sewage by upward filtration. After various questions were put and answered, it was moved by Dr. Oldright, seconded by Dr. Yeomans, and carried : That the thanks of the Board be presented to Mr. Symington for his kindness in showing his plans for purifying sewage to the Board. Dr. Oldright next read the report of the Committee on Disposal of Sewage and Water Supply, which, on motion, was received and adopted. The report of the Special Committee, on the means of lessening infant mortality, was read by Dr. Cassidy, and, on motion, was received and adopted.

The meeting then adjourned.

(Third Session.)

NOVEMBER 26th, 1884.

Board met at 2.30 p.m., there being present : Drs. Covernton, Yeomans, Bryce, Oldright, Cassidy, and Prof. Galbraith.

After the reading of the minutes, Dr. Covernton read the report of the delegates

to the St. Louis meeting of the American Public Health Association and the Cholera Conference, which was, on motion, received and adopted.

The Secretary read his report on the Almonte investigation, which was adopted, on motion of Dr. Yeomans, seconded by Dr. Cassidy.

Dr. Bryce then presented a special report *re* the sawdust nuisance, which was adopted on motion of Dr. Oldright, seconded by Dr. Yeomans.

The Board adjourned at 6 p.m.

(Fourth Session.)

NOVEMBER 27th, 1884.

The Board met at 10.30 a.m., there being present : Drs. Covernton, Oldright, Rae, Yeomans, Bryce and Cassidy.

Communications were received from Dr. Pomeroy, Tweed ; and Dr. Dafoe, Madoc, giving favourable reports of the measures taken to limit the smallpox epidemic.

A communication from Dr. Yeomans, *re* a cheese factory in Minto Township, was referred to the Secretary for action.

The Board then went into Committee of the Whole on the question of getting the sanction of the Lieutenant-Governor to special regulations to be adopted by the Board, toward the end of enabling the Board to take more active measures for limiting the smallpox outbreak in Hungerford. After consideration of the regulations the Committee rose and reported progress. The resolutions were adopted by the Board, on motion of Dr. Rae, seconded by Dr. Yeomans. The Board then adjourned.

(Fifth Session.)

NOVEMBER 27th, 1884.

The Board met at 3 p.m., there being present : Drs. Covernton, Oldright, Rae, Yeomans, Bryce, and Cassidy.

The reading of the Minutes and the consideration of numerous communications occupied the Board for some time, after which the matter of appointing a delegate to the Washington Cholera Conference was taken up. It was moved by Dr. Yeomans, seconded by Dr. Oldright, and carried : "That Dr. Bryce proceed to Washington to represent this Board at the Conference of State Boards."

The report of the Finance Committee was then read, and, on motion of Dr. Rae, seconded by Dr. Yeomans, was adopted.

The Secretary made a verbal report of the investigation into the pollution of the Waterloo Creek at Bridgeport, which was adopted.

Correspondence from London and neighboring municipalities was disposed of by the following resolution, moved by Dr. Rae, seconded by Dr. Yeomans, and carried :—

"That the Chairman be requested to wait upon the Minister of this Department and inform him that this Board has been requested by the Local Boards of London Township, London East, London City, and London West to investigate certain matters connected with the disposal of sewage in these municipalities ; and that the Board considers it to be its duty, in compliance with sec. 36 of *The Public Health Act, 1884*, to accede to such request, if such action meets with his approval ; that the chairman be further requested to ascertain whether such action does meet with his approval, and if the reply be in the affirmative, that the question be referred to the Committee on the Disposal of Sewage."

It was thereafter moved by Dr. Yeomans, seconded by Dr. Oldright, and carried :

That the Board would reiterate the opinion that the Secretary should receive a salary sufficient to enable him to relinquish his private practice, and that his whole time

should be devoted to the work of the Board, and that the salary of the chairman should be suitably increased.

Dr. Rae moved, seconded by Dr. Yeomans :

That Dr. Bryce proceed to Tweed and investigate the progress made by the local health authorities in their efforts to prevent the further spread of small-pox, and to give such advice as he may deem necessary. Carried.

It was then moved by Dr. Cassidy, seconded by Dr. Oldright: That the Board adjourn to the call of the Chair. Carried.

(Confirmed),

CHAS. W. COVERNTON,
Chairman.

APPENDIX B.

ARTICLE I.

CIRCULAR TO CLERKS OF MUNICIPALITIES, *RE* FORMATION OF LOCAL BOARD.

OFFICE OF THE PROVINCIAL BOARD OF HEALTH.

TORONTO, April 9th, 1884.

To the Clerk of the Municipality of ———

SIR,—Enclosed you will find copies of *The Public Health Act of 1884*, for the use of the Council of your Municipality. The Provincial Board of Health would request that the special attention of the Council at the present time be directed to sections 12, 13, 18 and 20 thereof. By a perusal of them you will notice that the Act requires the establishment of a Local Board of Health in your Municipality at the first meeting of the Council after the first day of May next; and also that the names of the members of the Board be forwarded, within a month after such regular meeting, to the Secretary of the Provincial Board of Health.

Section 12 provides that a certain number of ratepayers are to be appointed by the Council. By this it is not to be understood that members of the Council are necessarily excluded from appointment to positions on the Board; but it should hardly be necessary to point out to the Council that it is most desirable that the ratepayers appointed should be persons who are known to have some knowledge of, and interest in, sanitary matters, or who from their profession or calling may be supposed to have such knowledge and interest.

The Board trusts that the importance of section 20 of the Act, in which provision is made for the regular appointment of officers of the Board, will be so apparent to your Council that it will be acted upon, since useful, practical work on the part of the Board, as contemplated by the Act, must largely depend on the appointing of such executive officer or officers.

By reference to section 49 you will observe that every physician is bound under penalty to report every case of Scarlet Fever, Diphtheria, Small-pox, Typhoid Fever or Cholera that he is called upon to attend. You will also see that every physician in your district is to be furnished by the Medical Health Officer [or by the Secretary of the Local Board of Health] with blank forms, as directed in section 17 of Schedule A to the Act. I have therefore to ask you to attend to this matter, or to see that it is attended to, as soon as your Local Board is organized. On pages 6 and 7 of the Second Annual Report of this Board, which will shortly reach you, you will find statements of facts which ought to be convincing proofs of the necessity for making a commencement in this matter without further delay, if such commencement has not already been made.

The attention of the Council is further directed to sections 13 and 15 of *The Municipal Amendment Act, 1884*, whereby powers to pass by-laws for certain sanitary purposes are extended to Township Councils; and new powers are given to all Councils for the regulation of private wells, for the closing of these when found to be polluted, for the licensing of milk vendors (and consequent inspection of their establishments), for the closing of privy pits when found specially injurious to public health, for the regulation of earth closets, etc., and for the notification of infectious diseases.

You will find at the end of *The Public Health Act*, a by-law covering most of the sanitary requirements of every Municipality, and you will find by section 69 of the Act that it is in force in every Municipality—except in so far as it shall be amended or repealed by the Council, and except in so far as relates to officers not possessed by the Municipality.

Trusting that, at the earliest possible date, the provisions of section 18 of *The Public Health Act*, and of the other sections to which reference has been made, will be complied with, so that there may be systematic co-operation with Boards everywhere throughout the Province.

I have the honour to be,
Your obedient servant,

PETER H. BRYCE,
Secretary

ARTICLE II.

CIRCULAR TO SECRETARIES OF LOCAL BOARDS, *RE* ANNUAL REPORTS.

OFFICE OF THE PROVINCIAL BOARD OF HEALTH.

TORONTO, October 21st, 1884.

To the Secretary, Local Board of Health of

DEAR SIR,—With the view of presenting as complete a report as possible of the sanitary condition during the present year of the various municipalities of the Province and with the end of enabling this Board to make such provisions during the coming year, in common with State Boards of Health over the whole American continent, as will be most likely to successfully prevent the invasion of Cholera, and to limit those zymotic diseases always present in our midst, I would request you to bring the matter of preparing an Annual Report before your Local Board of Health at the earliest possible moment, so that the requirements of *The Public Health Act, 1884*, section 24, and of sections 1, 2, 3, Schedule A, may be complied with.

To facilitate the preparation of this report by your Board, and also to make the compilation of so large a number of reports by me as complete as possible, I would request that the questions found on page 148 of the Second Annual Report be followed as nearly as possible; and that in reports by Sanitary Inspectors the method found in the memorandum book supplied to your Board be carried out.

By section 1, Schedule A, it will be observed that the Medical Health Officer's Report is expected to be presented to the Board by the 15th of November. As it is most desirable that the Annual Report of the Provincial Board be issued at the beginning of next year, you will confer a great favour upon me by sending the report of your Board not later than the end of November, so that such report may be completed as soon as possible.

I have the honour to be,
Your obedient servant,

PETER H. BRYCE,
Secretary.

ARTICLE III.

ANNUAL REPORTS OF LOCAL BOARDS OF HEALTH.

NOTE.—The reports have been arranged in alphabetical order; Cities coming first, then Towns, Villages and Townships.

CITIES.

HASTINGS.

Belleville.

CHAIRMAN'S REPORT.

As Chairman of the Local Board of Health, I have made the following report of the work done by the Board during the year :—

“To JAMES W. DUNNET, Esq.,

“Mayor of the City of Belleville :

“DEAR SIR,—In pursuance of section 24 of *The Public Health Act, 1884*, I have the honour to present the following report of the work done by the Local Board of Health for the present year.

“In pursuance of section 28 of the said Act, the Chairman and Inspector of the Board have made personal inspection of 125 yards and water-closets, for the purpose of ascertaining what nuisances existed calling for abatement under the Act, and ordered the cleaning of twenty-three cellars and the emptying and disinfecting of sixty-eight water-closets, also the cleaning and disinfecting of seven pig-pens.

“An inspection of the wells of the city was made, and any found in a bad state were ordered to be cleaned out or filled up.

“During the year ninety-seven complaints of nuisances have been heard and attended to by the Chairman and Inspector, and the nuisances abated.

“The Council's attention was called to the bad state of the police cells in the City Buildings, and ventilators have been put in which will supply better ventilation. The bad state of the cells was, in a great measure, due to the neglect of the police authorities in not having the pails used in the cells emptied, and the cells cleaned out after being used during the night by prisoners.

“Small-pox having made its appearance in the northern townships of the county, proper precautions were taken that it should not reach the city. No case has occurred in the city or its immediate vicinity.

“In view of the possibility of an outbreak of Cholera next year, the Board would strongly recommend the advisability of the Council passing a by-law prohibiting the sinking of any more cess-pools, and adopting the dry earth system for water-closets, the ashes from the coal stoves used during the winter supplying the necessary material for use in the closets. The by-law might also contain a clause prohibiting the keeping of pigs within the city limits.

“The Board would also recommend to the Council the advisability of having the city supplied with a proper system of drainage, and a supply of good wholesome water.”

I have the honour to remain, sir,
Your obedient servant,

R. TRACY, M.D.,
Chairman of Board.

SECRETARY'S REPORT.

To PETER H. BRYCE, M.D.,

Secretary, Provincial Board of Health, Toronto :

DEAR SIR,—In reply to your circular of the 21st ult., and in pursuance of *The Public Health Act, 1884*, I beg to present for your consideration the following report of the sanitary work done during the year, and of the sanitary condition of this municipality.

1st. I was instructed to inform the public that members of the Local Board were appointed to look after each ward of the city, and requesting them to notify such members for the respective wards of any nuisance existing, or the Sanitary Inspector, Richard Taylor, Esq., all of which was done.

2nd. I was further instructed to call the attention of the City Council to the bad state of the cellar under the City Buildings, the better ventilation of the police cells, the construction of a water tank for washing the cells out daily, and asking the Council to provide a dumping ground for refuse, etc., etc., all of which was also attended to.

3rd. The Sanitary Inspector was instructed to fill up a stagnant pool of water on Victoria street ; to more effectually drain Cedar street, in Murney Ward ; to see to the removal of a dead horse in the Pine Grove, Bleeker Ward ; also, the prevention of the use of two old houses on Pinnacle street, in Baldwin Ward, as water closets, and the cleaning up of several water-closets on East Front street, in Ketcheson Ward, all of which matters received the attention of the Inspector, as I am informed and believe.

4th. Through the kindness of the Police Commissioners, the services of the members of the Police force were secured for the serving of the necessary notices required by the Board, and generally to aid the Board in sanitary matters.

5th. The By-Law in connection with *The Public Health Act* was considered by the Board, and sundry amendments suggested to the City Council ere its final passage by that body.

6th. The Sanitary Inspector was instructed to notify the owners of the brewery in Murney Ward either to cart away the washings, or construct a covered drain therefor to the river ; and also the owners of all yards and premises on both sides of Front street which he might consider nuisances, within three days, were called upon to abate the said nuisances.

7th. The City Council was asked for a grant with which to purchase disinfectants for gratuitous distribution amongst the poorer classes.

8th. A committee was appointed to draft rules of order and the order of business for the government of the Board.

9th. The circulars received from the Provincial Board, *re* Cholera, were handed to the Women's Christian Association for distribution, and also to the authorities of Albert College.

10th. The Sanitary Inspector reports improvement in sundry isolated cases of former defective water closets, the cleaning out of several cellars on Front and Campbell streets, and that the city generally is in a good sanitary condition.

I have the honour to remain,

Your obedient servant,

D. B. ROBERTSON,
Secretary.

BRANT.

Brantford.

MEDICAL HEALTH OFFICER'S REPORT.

To the Chairman and Members of the Board of Health :

GENTLEMEN,—In compliance with the provisions of *The Public Health Act, 1884*, I present my annual report on the sanitary condition of the city.

Under the authority of this Act the Board of Health was organized in the month of May last, and the undersigned was appointed Medical Health Officer; Mr. Thomas McMeans (P. C.) was subsequently assigned to do duty as Sanitary Inspector. The by-law in connection with the Act came into force on July 1st, therefore this report embraces a period of only a little more than four months. For the purpose of attending to the various duties imposed by the Act, and for the greater convenience of the public, I have, with the Sanitary Inspector, attended at the City Clerk's office daily, from two to three o'clock p.m.

The sanitary work done during the short period that the Act has been in force includes the following, namely:—Ninety-seven of the most offensive privy vaults have been opened and cleaned by the city contractor; fourteen condemned, emptied and filled up with earth; four large cess-pools emptied and cleaned; eight large cess-pools condemned, cleaned out and filled up with earth; fifty-seven ash-closets established in place of privy vaults—a further large number will be put in new buildings (which are in course of erection) before the end of the year; thirteen pig-styes condemned and abolished; and the others (which are removed the required distance, 70 feet from dwellings) are regularly cleaned and disinfected. From the canal banks (Water street) a large amount of animal and vegetable refuse, and other garbage, has been removed, and further deposits have been prevented.

The Sanitary Inspector has done much other useful work in inspecting nuisances complained of—causing the removal of garbage from streets and preventing further deposit. The Medical Health Officer has spent considerable time in acquiring information as to the different methods of the disposal of sewage, and as to other sanitary matters. He has made two special visits to Toronto to consult with the Provincial Board of Health on these matters, and has also had the advantage of the opinion and advice of Professor Carpenter, who has taken great interest in the introduction of the dry earth system into towns in England. Professor Carpenter, on his late visit here, expressed his interest in, and strong approval of, the effort to apply this system in Brantford.

The policy of the Board of Health is to introduce the dry earth or ash closet system into general use in Brantford, and it is believed that when the public at large come to understand its advantages, they will co-operate cheerfully with the Board in this important sanitary work. Some of these closets have been in use here several years, and experience has thus far shown that the ample supply of coal ashes may be conveniently used instead of dry earth. The cost of an earth or ash box is much less than that of a privy vault, and the comparatively inoffensive contents may be removed in the day time and with little or no expense, once or twice a year—farmers and gardeners being willing to take them as manure; whereas the emptying of privies is not only expensive, but is extremely offensive, poisonous to the atmosphere, requires to be done at night, and is necessarily dangerous to health.

The most serious matter to consider is the contamination of drinking water. No householder can be sure that his well is not contaminated from some cess-pit, perhaps hundreds of feet, or even yards, distant; and it is well known that at the present time a great many wells in the city are impure. The importance of this matter cannot be over-estimated, especially in a city which, like Brantford, has not a supply of drinking water, except from its wells.

Included in the sanitary work done during the last four months, I refer to the work done on the county premises in the centre of the city. With the cordial co-operation of the county authorities, (for which they are entitled to the thanks of every citizen of Brantford), the whole privy or cess-pool system has been entirely abolished and a plan put into operation, including the dry ash system, which provides for the removal of all solid and liquid refuse at an annual cost of much less than heretofore paid for the mere emptying of the cess-pits. This work shows that the dry-earth system supplemented, in densely built places, by tight ventilated tanks for liquid refuse may, at a very small cost, answer all the needs of the City of Brantford as effectually as a system of sewers constructed and maintained at an enormous cost.

The health of the city for the year has been remarkably good. In the four months covered by this report the number of deaths has been thirty-nine, according to the regis-

tration books of the City Clerk, and as Mr. Woodyatt has taken great pains to secure registration, this undoubtedly includes all which have occurred, and represents an annual death rate of about ten in one thousand. Only four deaths have occurred from Zymotic diseases. This of course is due to the fact that, fortunately, we have escaped an epidemic of any of the contagious diseases.

The sanitary condition of the city at the present time is fairly good—many of the worst nuisances having been abated. Besides all the evils resulting from the closets which yet remain, there also exists the canal. This stagnant pool of water, almost in the heart of the city, must be regarded as a source of danger in case of any serious epidemic breaking out. It has been suggested that this danger might be entirely removed by converting the present stagnant water into a narrow stream—this to be done by filling up a portion, namely, that adjoining the railway track. The land thus reclaimed would, in the opinion of good judges, compensate for the expense incurred. If this evil were removed and the dry earth system brought into general use, Brantford would undoubtedly be in the best sanitary condition of any city in Canada. On account of its close relation to matters pertaining to the public health, I may here properly mention the great boon of a city hospital, so long and anxiously desired, which Brantford has now received from the hands of one of her citizens, Mr. John H. Stratford. Perhaps no city of a similar size in America possesses a hospital so well situated, so handsome, so excellently planned, and completely equipped as this.

It may justly be considered as a matter for congratulation that during the short period of four months, during which the Act has been in force, such an excellent commencement has been made in sanitary work.

In conclusion, I have to thank the Mayor and Council for placing at my disposal the services of so active and energetic an officer as Mr. Thomas McMeans, and the Chairman, members of the Board, and the Secretary, for their cordial support and assistance in the discharge of my duties.

I have the honour to be,

Your obedient servant,

WILLIAM T. HARRIS, M.D.,
Medical Health Officer.

—
WELLINGTON COUNTY.

City of Guelph.

CHAIRMAN'S REPORT.

GENTLEMEN,—I have the honour to lay before you the first annual report of the Board of Health for the City of Guelph, and which is called for by an Act passed at the meeting of the Legislative Assembly, held in Toronto this year, and which is called the Public Health Act. That Act provides that for each city and town of more than 5,000 inhabitants there shall be a Local Board of Health, to consist of the Mayor and eight ratepayers, to be appointed annually by the Municipal Council, and in accordance with that Act a Local Board of Health was formed on the 27th day of May last, consisting of the following members: His Worship, Mayor Chase, Chairman; members, Messrs. Melvin, Robertson, Hewer, Coffee, Marton, Drs. Keating, Howitt and Nunan, with the City Clerk, as Secretary of the Board.

Since the formation of the Board on the 27th of May last, six meetings have been held, and at its first meeting a motion was made by Mr. Melvin, seconded by Mr. Hewer: That His Worship the Mayor, with Drs. Keating, Nunan and Coffee, with the mover, be a Committee to thoroughly go through the By-law including Schedule "A" of the Act, passed at the meeting of the last Ontario Parliament, and report any amendments or alterations they think necessary. At the next meeting of this Board this was accordingly

done, and at the second meeting, the necessary alterations having been made, it was moved and seconded that the Health By-law, as amended, be submitted to the Council for consideration, and the advisability of passing the same as the Health By-law for the city. Carried.

At the third meeting of the Board eight members were present; also the Sanitary Inspector, from whom a report was received regarding the health of the city. In this report he recommended the cleaning of the creeks running through St. James Ward, and the drain on Priory street cleaned and covered over. Authority was given to the Inspector to have this work done at once. A complaint was also considered with regard to the girls' closet at the Central School, which was in such a position as to cause the water in the well belonging to Mr. Cull to become unfit for drinking purposes. A request was sent to the School Board to have the vault removed, which was at once done. At the third meeting of the Board on the 29th of August, there were eight members present. A somewhat lengthy report was received from the Sanitary Inspector. It was moved and seconded that the report be received and considered at a future meeting. Carried. In this report the Inspector drew the attention of the Board to the water in a large number of wells in the city, which he had reason to believe were contaminated by their close proximity to privy vaults, and asked the Board to have the same examined. He also complains of a number of foul drains, which will require attention, about the city, and strongly recommends that privy vaults be abolished as soon as possible and that the dry earth system be substituted. At a meeting held on the 29th September, at which eight members were present, it was decided to adopt the report of the Sanitary Inspector presented at its last meeting; it was also decided to have the complaint made in that report attended to, and that a competent man be engaged by the said Board to have the water complained of properly examined, and if found unfit for drinking purposes cause the said wells to be closed up.

In conclusion, gentlemen, from what I can learn from the Sanitary Inspector, and also the medical gentlemen of the city, we have cause to congratulate ourselves upon the very healthy state of our city. We have very little sickness at present. There have been during the past year quite a number of cases of Diphtheria, but I am glad to say that very few of them have proved fatal. The recommendations in the report that has been presented to you by the Sanitary Inspector, are in my opinion quite necessary, and should be carried out by this Board. A report will be laid before you by the Inspector, showing the result of the examination of the well-water complained of, and also a report of his work during the past year. I thank you, gentlemen, for your attendance at all our meetings, and for your consideration on all matters brought before you for the benefit of the health of the city.

I am, Gentlemen,

Your obedient servant,

CALEB CHASE (Mayor),

Chairman, Board of Health.

SANITARY INSPECTOR'S REPORT.

To the Chairman and Members of the Board of Health:

GENTLEMEN,—I have the honour to present you with my first annual report as Sanitary Inspector for the city of Guelph. During the past summer I have been kept busy attending to my duties in various parts of the city, and when you come to consider that from the first day of April up to the present time, no less than 320 complaints have been made to me by different persons, and all of which had to be attended to, besides other work, you will readily see that it is no easy matter for one man to attend to the duties that he is called upon to perform. A large number of these complaints were made against persons who are in the habit of keeping pigs; and in every case I quite agree with those who complained, as I consider that keeping these pigs alongside of any person is a very great nuisance, and it is my intention to fully carry out the by-law regarding

them, also slaughter-houses, and those who engage in the business of rendering tallow. Since the first day of March last one hundred and ninety-six closets have been cleaned out by Mr. Hughes, the contractor, at a cost of nine hundred and seventeen dollars (\$917.00), all of which has been done very satisfactorily; very few complaints have been made in regard to overcharging by the contractor, as heretofore. The nuisance ground has proved to be of great value to the city during the past season, for in it I have been enabled to bury all dead animals that have been brought to my notice, and at the same time disposed of such nuisances as were not fit to be placed in the quarry holes about the city. The number of dead animals taken out of the river and from off the streets this year has far exceeded that of last; the number taken from the river alone was seventy-four, and this I consider is a very great evil, and one that ought to be remedied. The cost of removing them was \$19.00, and the total amount spent by the Board of Health during the past year has been as follows:—

Amount granted by Council to Board.....	\$300
Removing dead animals and other nuisance.....	\$41
Cleaning out creeks and drains	30
Expenses to Brantford.....	4
Making nuisance boards	15
Salary for Inspector.....	100
Total amount expended.....	190
Balance to credit of Board of Health.....	\$110

I have visited the schools frequently during the past year, and have found everything about them very clean, but I think that during the winter months the rooms are kept too closely shut up—there is not sufficient air. In a large number of rooms some thirty or forty children are placed in one room, and if the day happens to be a little chilly or cold, the doors and windows are all closed, and then how long is the air in that room fit for respiration? Not more than ten minutes. Then the children have to breathe the same air over and over again; but some people say, “Oh, they are young, they can stand it.” I am sorry to say that the life and health of our children do not receive that attention which they deserve, and much mischief comes from the over-estimation of the strength and hardiness of our youth, as it is often in youth that the seeds of invalidism and weakness are planted, and in no other period of life is greater precaution necessary for the preservation of health. Medical and scientific authorities agree that school-rooms should be provided with a space of 1,000 cubic feet of air per pupil, also with means of changing that amount frequently, and it would be well for the teachers themselves if they would pay greater attention to these matters, as a large majority of them injure their own health by not having their rooms sufficiently ventilated; but they should also be careful not to allow the children under their charge to sit near a draft, for although foul air is a slow poison, yet a blast of cold air will do a great deal more harm. The closets and outhouses of the school have all been well cleaned and thoroughly disinfected during the vacation. During the summer Dr. Bryce, the Secretary of the Provincial Board of Health, visited me and gave me a great deal of information regarding sanitary matters as to help me very considerably in the discharge of my duties. The directions for preventing the spread of Asiatic cholera and other contagious diseases, which he kindly supplied me with, were, by the kindness of the daily papers of this city, published for the information of the people, and from my own knowledge it has had great effect upon some who scarcely ever took any interest regarding their yards and outhouses.

Since the medical gentlemen of the city have been supplied with forms for reporting contagious diseases, I have, through the City Clerk, been regularly informed of any such disease that may have taken place in the city, and in all cases so reported I have at once gone to such houses and have taken such steps as I considered necessary for the preventing of the spread of the disease. I have notified the parents not to allow any of their children to attend school until such time as I or they have received a certificate from the

attending physician, that there is no danger from their doing so. I have also notified the teachers not to allow them back until they receive authority from myself. I have also ordered the house where such disease exists to be placarded, in order to prevent others going to visit that house, so that by the house being placarded it announces to all comers that infection is within, and they are shielded from any liability under the common law for concealing the disease and exposing others, and the physician reporting the case is also protected. Some people at first objected very much to have their houses placarded, and considered it a violation of personal liberty, but a little argument soon convinced them otherwise, and they see at once that no man has the natural or acquired right to expose his neighbours to deadly contagious diseases by concealing it in his own house. I have during the summer had occasion to speak to a great many people in the city about the manner in which they disposed of their slops. I have frequently seen some stand at their doors and throw them down not three feet away from them, and at times when the heat of the sun has been so great, the stench that arose from these places was almost unbearable; and besides this it must find its way into the well, as in a great many cases the wells are close to where they frequently throw those slops. In my report for the month of July last, and which was printed in the daily papers, I spoke strongly on this matter, and in the reports which I have received from the medical gentlemen of the city, this is one of their greatest complaints, and they have reported the sanitary condition of the premises as being very bad, but I trust that those who are in the habit of disposing of their slops and refuse in such a causeless manner will soon see the evil of so doing. During the month of September I visited the city of Brantford for the purpose of inquiring into the manner in which they carried on the removal of night-soil, and I found that the system was the same as our own. It was removed by contract and charged for at the same rate as done here, and which appeared to be satisfactory to the people. The soil is removed to a piece of ground just outside the city limits, where it is manufactured and sold at the rate of thirty dollars per ton, and although there are a great many people living in the vicinity of this nuisance ground, there are no complaints made; but such is not the case with us, for although the nuisance ground hired by our contractor for the dumping of the soil, and which is outside of our city limits, and at least 500 yards from any house, complaints have frequently been made, and the contractor has been notified by the Township Board of Health to discontinue the dumping of any more soil at that place, and for that authority they quote section 4 of the by-law, passed at the last meeting of the Ontario Parliament, which reads:—"That it shall not be lawful for any person within the said municipality to permit or suffer the accumulation upon his premises, or to deposit or to permit the deposit upon any lot belonging to him, of anything which may endanger the public health, or to deposit on any public street, square, lane, or on any by-way in front or in rear, or alongside of his building or premises, or in any pond, creek, river, or running stream, any refuse or other refuse or vegetable or animal matter, or any other dirt or filth." Now, I consider that there are two ways to look at this. First:—Those who complain must prove in evidence that the depositing of the refuse from the city on the ground rented for that purpose, is injurious to the public health, because if this is enforced, then the question arises where are we to deposit our nuisances. I consider that that part of the by-law should be altered. I have frequently visited the nuisance ground, and on no occasion have I detected anything which I consider injurious to the health of those complaining. During my visit to Brantford I saw a number of the dry earth closets which have been established in that city, through Dr. Harris, the Medical Health Officer, and found they worked well and gave great satisfaction, ashes being used in most cases instead of earth. I was most cordially received by the City Clerk, and every information that I asked for was given me. They are not at present forcing the closing up of the old privy vaults, but in all new houses that are being built the dry earth system is to be used, and I would strongly recommend the same to be carried out here. A note and memorandum book has been supplied me by the Secretary of the Provincial Board, for the purpose of making a house to house inspection throughout the city. I have made only a few of these inspections, as I found that the complaints made kept me busy in attending to them. It is my intention to commence with it as soon as possible, the information obtained by such inspection is as follows:—1st, owner; 2nd, number of house; 3rd, kind of house; 4th,

number of persons in house ; 5th, foundation, condition of ; 6th, cellar, condition of ; 7th, sink and house drain, condition of ; 8th, closet, condition of ; 9th, premises, condition of ; 10th, water supply, condition of ; 11th, manufactory, condition of ; 12th, school, condition of ; 13th, recommendations, 1st visit, 2nd visit, 3rd visit ; the recommendations are required to be brought before the Board. I will give you for information the result of my inspection of two houses in the city, one was 949 Woolwich street, a brick house, and which had everything about it to make it comfortable and healthy, the other was No. 7 Preston street, a rough-cast house, cellar damp, not ventilated, closet close to house and near well, and to make matters worse diphtheria was in the house, and as the attending physician stated that it was through the bad state of the building, I at once went to the agent of that house and requested him to have it attended to at once, and also to clean the closet, and as far as possible it was done. I point out this matter to you to show the difference that exists in houses, which are built by gentlemen of means for their health and that of their family, but I am glad to say that the time has come when the law demands those who are building houses for the purpose of renting, that the health and comfort of those who may chance to occupy them be considered. In my report for the month of September, I drew your attention to the filth which was allowed to run into the river from the Alma Block, but up to the present time I have not received any instructions to have the nuisance abated, for the information of the Board and that of the citizens of this city. I give a detailed list of the deaths and their causes from the first day of January, 1884, up to the present time, also the number of births :—

Disease—Consumption, 22 ; Old age, 14 ; Still-born, 21 ; Diphtheria, 6 ; Dropsy, 1 ; Pneumonia, 8 ; Bright's disease, 1 ; Heart disease, 7 ; Apoplexy, 1 ; Burst blood vessels, 1 ; Disease of Bowels, 5 ; Convulsions, 2 ; Spinal Paralysis, 2 ; Summer complaint, 1 ; Brain disease, 2 ; Liver complaint, 2 ; Cholera Infantum, 1 ; Bronchitis, 4 ; Drowned, 2 ; Typhoid fever, 7 ; Paralysis, 4 ; Accident, 2 ; Dentitio, 1 ; Softening of brain, 1 ; Compression of brain, 1 ; Diabetes, 1 ; General debility, 2 ; Tumor, 1 ; Sciatica, 1 ; Acute Meningitis, 1 ; Diarrhea, 1 ; Kidney affection, 1 ; Blood-poisoning, 1 ; Thrush, 1 ; Inflammation, 1 ; Scarlet fever, 1 ; Gastro-enteritis, 1 ; Jaundice, 1 ; Croup, 1 ; Water on brain, 1 ; Paralysis of brain, 1 ; Tubercular Meningitis, 2 ; Worm fever, 1 ; Peritonitis, 1 ; External hemorrhage, 1 ; Hydrocephalus from birth, 1 ; Congestion of brain, 1 ; Poisoned, 1 ; Disease of liver, 1 ; Cancer, 4. Total, 149.

One hundred and ten were buried in the Protestant Cemetery, and thirty-nine in the Roman Catholic Cemetery. There were two hundred and sixty-nine births. On the 23rd of October I obtained four samples of water from different wells in the city, and which I had reason to think were contaminated and unfit for drinking purposes ; these samples were taken by myself to Professor Hare, of the Ontario Agricultural College, for his examination, and I herewith attach his report. I might state that I was careful in having clean glass stopped bottles which I obtained from the college, and I also took precaution to pump at least two galls of the water before I took the sample.

ONTARIO AGRICULTURAL COLLEGE, Nov. 17th, 1884.

TO ADJUTANT CLARK, Sanitary Inspector for the City of Guelph.

DEAR SIR,—I have completed the analysis of the four samples of city water submitted for examination, and will briefly indicate results as follows :

We found all high in solid matter except No. 3. No. 2 being especially high.

Water that contains 30 or 40 grains per gallon of solid matter has been condemned for drinking purposes ; the solid matter was composed almost wholly of carbonates of calcium and magnesium.

No. 1 and 3 gave little chlorine.

No. 2 contained sufficient chlorine, 56 grains per gallon, to indirectly indicate sewage contamination ; from the association of chlorine with a high percentage of free and albuminoid ammonia, vegetable as well as animal contamination have made the water of No. 4 impure.

From the free ammonia of drinking water, no inference regarding its impurity can be drawn, unless the percentage of albuminoid ammonia found in each case more than quadruples this percentage: the large percentage in free ammonia in No. 4 absolutely condemns the water. The percentage of albuminoid ammonia in the four waters is high, 0.15 per million, absolutely condemns water for drinking.

The four waters analyzed are unfit for drinking purposes. No. 1 least, No. 4 most. No. 1 might be used without producing serious results; No. 2, 3 and 4, especially No. 4, cannot. In the following table the impurities of all four waters are clearly indicated, and from the explanations given above will be easily and intelligently understood:—

WATERS ANALYZED.	GRAINS PER GALLON.		PARTS PER MILLION.		
	Solids.	Chlorine.	Free Ammonia.	Albuminoid Ammonia.	Oxygen Consumed in moist Combustion.
No. 1.....	31.7	1.6	0.160	0.440	0.7
No. 2.....	58.0	5.6	0.106	0.441	3.1
No. 3.....	21.9	0.4	0.132	0.445	0.9
No. 4.....	30.2	3.2	2.933	0.968	6.0

By this report you will see that the whole four wells are in such a state as not to be considered fit for drinking purposes; the wells are situated in the following parts of the city.

Well No. 1.—Mrs. Armstrong's, London Road.

Well No. 2.—Dublin street, opposite the Central School; this well is used by seven or eight families.

Well No. 3.—Suffolk street; this water was reported to me by Dr. McPhatter, as being unfit for drinking purposes, as he considered that the case of typhoid which he had been treating was brought on by the water.

Well No. 4.—You will see that this is the worst of the four wells, and is reported as quite unfit for drinking purposes, and should be at once closed up; it belongs to the Federal Bank, and is situated on Sunderland street. I would strongly recommend that steps be taken as soon as possible to have something done to these wells, or cleaned out and made fit for use.

In conclusion, gentlemen, I think we may congratulate ourselves on the very healthy state of our city.

I have had great pleasure in performing my duties during the past year; almost every person in the city with whom I have had to deal, most willingly obeyed the instruction given them, and in a very cheerful manner.

I have the honour to be, sirs,

Your most obedient servant,

W. CLARK,

Sanitary Inspector.

P.S.—Since I have completed my Report, I received a notice from Dr. Herod that he had a case of typhoid fever in the family of the late Mr. Taylor, of this city. This case I am sorry to say proved fatal, after a few days' illness. Dr. Herod informed me that he considered the water which this family were drinking was quite unfit for use, and he strongly advised me to have the water from the well examined. I at once took a sample of the water to the Ontario Agricultural College, to Professor Hare, for his examination, and the following is the result.

AGRICULTURAL COLLEGE, Nov. 22nd, 1884.

Analysis of the Drinking Water taken from the well of Mrs. Taylor, George St., City:

We found the solids of this water largely made up of carbonates, and the percentage present but slightly above 40. Though the water is remarkably free from chlorine and free ammonia, the percentage of albuminoid ammonia is high enough *most* strongly to condemn its use. From the small quantity of chlorine and large quantity of albuminoid ammonia, we conclude that this water has been contaminated with vegetable and not animal matter.

SAMPLE.	GRAINS PER GALLON.		PARTS PER MILLION.		
	Solids.	Chlorine.	Free Ammonia.	Albuminoid Ammonia.	Oxygen in Moist Combustion.
No. 5	48.1	3.4	0.325	0.459	1.59

I have the same remarks to make regarding this well as I made of the former ones.

W. CLARKE,

Sanitary Inspector.

WENTWORTH.

City of Hamilton.

CHAIRMAN'S REPORT.

To His Worship the Mayor and Aldermen of the City of Hamilton:

GENTLEMEN,—I herewith respectfully submit my first annual report in accordance with the by-law on Public Health. The general work of the department during this year far exceeds that of any preceding year, both in amount and variety. The ordinary routine of duties has been performed with all the success which could reasonably be expected, while special investigations of much interest have been undertaken, having for their object the examination of the sanitary conditions of houses, yards, etc. The reports covering these investigations will be found in the report of Dr. Ryall, the Medical Health Officer to the Local Board of Health, which accompanies this. Our death rate continues low, when compared with that of other cities of about the same population, and no doubt when the sewers are put in proper condition, will be still lower. It is a matter for thankfulness that, during the past year, the city has not been visited with any widespread cause of mortality or sickness, beyond the ordinary causes which we have almost every year. I regret to say we have had several cases of Diphtheria during the past few months, and a few cases are still reported. The Board has taken every measure to stamp it out; the sewers have been regularly flushed at the heads, and copperas freely used during the dry weather, and every precaution taken to confine it to the houses reported, which we have successfully done in most cases. The blessing of having pure water, which I hope every citizen will soon enjoy, will add greatly to the health of the city. The Board trusts that the Council will not delay in providing a proper ventilation to the public sewers, especially now when so many gully drains are being tapped. This ventilation, so important, so generally absent, and so strangely neglected in this city is producing great discomfort and injury to health. The Board has had all the cow byres and dairies inspected, and found some in a very unclean condition. Certificates were granted to those found to be in proper order according to law, and those not complying were notified to remove them. It is here worthy of remark that the impetus given to sanitary reforms by the new law coming

into force, has been very marked in our city. It has caused the removal of a great number of old-standing nuisances and a general cleaning up, and it is with pleasure I have to remark that the citizens have nobly assisted us to carry out the law. Such a cleaning out of yards (over 900 privies) and cellars has never been done here in the same time before. The Board has had twelve regular meetings, and the attendance of the members has been very satisfactory. I will here mention that during the year the Board has introduced several important measures. First, the scavenger system. The Board put on three single waggons at \$2 per day for two months, as a trial, and it has been demonstrated that it was necessary. The tons of garbage, ashes, etc., they have removed would nearly all have been thrown into the streets and public lanes. At the end of this month the Board proposes to change the single waggons to double ones, so that the whole city will be accommodated. Second, the house to house inspection, which has been done by Mr. Peacock in a very satisfactory way, and it was not commenced any too soon, as his reports show. Third, the erection of a furnace to burn up all city refuse, etc., that should not be thrown in any place in the city. The locality where the furnace is situated will require all the ashes, and such refuse that the city will have for years to come.

The following is a statement of the expenditure to 31st October, 1884 :

Salaries and labour	\$2,086 39
Printing and stationery	247 25
Lumber	58 86
Chemicals and sundries	189 47
	\$2,581 97

Respectfully submitted,

WM. S. MORGAN,
Chairman.

MEDICAL HEALTH OFFICER'S REPORT.

To the Chairman and Members of the Local Board of Health :

GENTLEMEN,—In accordance with the by-law on public health, I now present my annual report ; the short time which has elapsed since the organization of your Board will not permit me to enter into details as fully as might be expected. It is pleasing to observe that the recent Health Act has produced a salutary effect upon health departments generally, and educates the public to a better conception of what is expected from a civilized community.

During your short period in office, it is worthy to remark that you have introduced measures calculated to be of great public service. I shall allude to them briefly :

The house to house inspection, as far as it has gone, gives a correct history of our general sanitary condition, and will prove a valuable groundwork for future improvement.

The scavenger system, (which I recommended some years ago), you have wisely inaugurated. Meeting as it does with the full approbation of the people, it cannot fail to prove a success, provided that your scavengers are attentive in the performance of their duties. During the winter months a scavenger system is absolutely necessary to prevent accumulations of refuse, ashes, etc. When the spring arrives I feel sure that the benefit derived therefrom will be forcibly demonstrated.

The crematory which is being established will supply a long-felt want for the destruction of city refuse, etc., and is a means likely to be adopted in other parts of our Dominion.

Those three innovations are steps in the right direction, and should be heartily endorsed by our citizens. I look upon them as essentially requisite for the foundation of a good sanitary system.

Placarding houses having contagious diseases therein, may prove valuable as a warning to people who will be advised by it. I doubt, however, that it has the full effect

intended. Isolation cannot be strictly carried out without the co-operation of the medical attendant, where the latter openly pronounces himself opposed to isolation, with the exception of cases of Diphtheria. I presume that your Board will have to take action.

The speedy and private interment of the dead has been satisfactorily attended to.

The placards are given to be posted on receipt of No. 1 notification of the disease from the attending physician, and are not removed until No. 2 notification of recovery or death is received, and not then unless certified that disinfection has been efficiently attended to, and, in cases of death, that burial has taken place. The medical attendant must be responsible for the accuracy of the information given. During the present year to date notifications of 104 cases of Diphtheria have been received, and 30 deaths resulting therefrom. During the same period of 1883 I received only 27 notifications of that disease, and 19 deaths, making a mortality therefrom very alarming. I think that this large proportion of deaths is due to incomplete returns of the number of cases which occurred.

This disease is apparently getting better understood. Of course I don't presume to question the accuracy of diagnosis, but the treatment in some cases is of a remarkably speedy curative nature. I cannot help noticing one case, where the placard was posted, and brought back by the patient in two days after, seemingly nothing the worse of so serious a disease. I gave her a lecture about breaking the law, but did not think it advisable to have her fined \$50 for removing the card without permission.

The contagious diseases reported for 1884 to date are as follows :

Measles, 1 ; Scarlet Fever, 26 ; Diphtheria, 104, and Typhoid Fever, 28.

I am led to believe that there are a much larger number of cases of Typhoid than reported.

The disposal of excreta and sewage has become a question of much importance, and being one that your Board must deal with, I therefore respectfully present to your attention the urgent necessity of having the Cathcart-street sewer put into a permanent state of repair as speedily as possible, and also that all sewage and excreta passing through it be intercepted before reaching the inlet. The lowering of the water in the bay will not conduce to our sanitary condition, and continuing the deposit of excreta, etc., into the inlet may be productive of serious consequences.

I would also ask your Board to examine into the principle of interception invented by Mr. Symmington, who would be pleased to furnish you with all its details ; it appears to me exceedingly valuable, and well adapted to the requirements of the city ; its feasibility and advantages can be easily tested on a small scale by applying it to any of our institutions having sewer connection, such as the city hospital, which indeed would require a separate one of its own. Its application might well extend to factories from whence very offensive matter is discharged into the sewers at very uncertain intervals, contaminating our streets and houses with very sickening odors.

I feel convinced that once its efficiency is tested it will meet with universal favour.

I have already cursorily alluded to the inspection made by Mr. Peacock, the extent of which consists of the entire of No. 2 Ward, No. 1 Ward as far as the east side of Emerald-street, No. 3 Ward, King-street, from Park to Bay, No. 5 Ward all south of the railroad, and No. 6 Ward, King-street. Inspector Ford has gone over No. 5 Ward since, at such intervals as he could be spared for that work, and reported what instructions had been attended to. Mr. Peacock has also visited a second time such places as required his special attention in Wards No. 2, 5, and 6, and reported that the following changes had been effected since his first inspection, viz. :

Water closets repaired and new ones introduced	45
Privy vaults cleaned out and filled in	35
Cesspits cleaned out and filled in	17
Cesspits cleaned out	2
Sinks newly trapped	79
Earth privies introduced	9
Refrigerators disconnected from sewers	5

He also reports that the premises generally have a more healthy appearance. He, however, states that some premises and waterspouts remain in a bad condition, making special reference to places on King-street, in No. 6 Ward. I expect that some more active measures will have to be taken in regard to them. He will inspect them again, and if found in a bad condition the matter will be brought to your further notice.

I have not had sufficient time at my disposal to tabulate all the items recorded of premises inspected, but the following will give a pretty accurate idea of our sanitary state.

Premises inspected, 2,761; found dirty, 601; cellars dirty, 196; wet or damp, 39; having sewer connection, 1,181, untrapped sinks, 69; water closets, 1,060; out of order, 37; insufficient water flush, 4; water supply cut off, 14; privy vaults, 1,800; connected with sewers, 63; bad water flush, 60; reported full or bad, 384; to be removed and filled in, 44; earth privies in use, 13; drains of all kinds, 86; common cesspits, 148; well water in use, 52; water complained of, 6; wells used as cesspools, 41; filling in, 17; alleys and lanes dirty at rear of premises, 16; refrigerator waste connected with sewer, 13.

Very few of the drains connected with sewers are trapped, and only a small percentage of houses have sewer ventilation. I would draw your attention to privy vaults connected with sewers without sufficient water supply to flush them out daily. I believe that many of our sewers get choked through this means, and would recommend that all such should be discontinued. I would also bring to your notice that many houses on route of our sewers have not been connected, and the inmates have no proper accommodation for the disposal of sewage, wash water having to be thrown in the yards, in some cases into privy vaults, or on the streets.

Mr. Peacock speaks highly of the earth privy system, having noticed several during his inspection; they appear to me preferable to the common vault, the contents being more easily and speedily removed, devoid of smell if properly attended to. The by-law explicitly demands that dry earth or ashes shall be thrown in daily, in sufficient quantity to absorb all moisture, and when the box is full it can be removed and covered with a rain proof cover, and taken away at leisure, while another box is put in its place. This does away with the objection of freezing in winter, and nothing short of laziness or desire to frustrate the object in view can mar its success.

Before concluding I would suggest to your Board that the house to house inspection be continued during the winter, and that Mr. Peacock continue to work under my instructions.

I would also suggest that your Health Inspectors shall have certain duties allotted to them, so that each may know exactly what he has to perform.

Respectfully submitted,

I. RYALL,

Medical Health Officer.

FRONTENAC.

Kingston City.

SECRETARY'S REPORT.

The Local Board of Health of the City of Kingston has not a Medical Health Officer, but has a Sanitary Inspector who is a member of the Board and acting without emolument, the City Council not having set apart any moneys to defray expenses incurred by the Local Board. Several meetings of the Board have been held and an inspection of the city ordered to be made, which has been done by the inspector and police constables. A regular record of the inspection and cleansing of the city, however, has not been kept, but a complete overhauling is supposed to be gone into in the spring and summer. The privies, water-closets, urinals, etc., are in first-class order. Our general and small-pox hospitals are isolated, the latter being chiefly used as an isolation hospital in cases of epidemic.

M. FLANAGAN,

Secretary.

MIDDLESEX.

London City.

CHAIRMAN'S REPORT.

1. In compliance with the provisions of the *Public Health Act*, 1884, the City Council, on the 19th May last appointed by by-law a Local Board of Health, consisting of the following ratepayers :

His Worship the Mayor, C. O. Hyman, Esq.,

Alderman James Cowan,

“ Thomas C. Hewitt,

“ Samuel Stringer,

“ William Scarrow,

“ Dr. James F. Nevin,

Dr. F. B. Wilkinson,

William Saunders, Esq.,

Thomas H. Tracy, City Engineer.

Mr. Saunders declined to act, and Dr. Henry Arnott was appointed in his place. Mr. William Bell, in addition to his other duties as License Inspector and Relief Officer, was re-elected Health Inspector, and with the time at his disposal has proved himself an efficient officer. Chief of Police Williams, and Mr. Wm. Platt, Inspector of water under the Water Commissioners, were appointed Assistant Health Officers without remuneration, both of whom rendered good service in sanitary work.

2. Your Board appointed a sub-committee, with power to engage the services of one assistant Health Officer and two constables, who began a thorough and systematic inspection, and for over two months continued their services, visiting almost every house, wells used and unused, cellars, privies, cesspools, and all outhouses, the result of which has been a general cleaning up all round, and which is still in progress.

3. Your Board has much pleasure in reporting the general state of health within the city as good. There has been no epidemic. There was one case of small-pox thrown upon the city by another municipality, which caused no little alarm as well as expense. The patient was cured and discharged after several weeks' confinement. The sewers have been regularly flushed and kept clean, and all refuse and filth injurious to the public health have been removed outside the city limits.

4. Your Board would recommend the removal of the wooden building used as a small-pox hospital, as being totally inadequate for the city's requirements ; and should a visitation of Asiatic Cholera take place, we are without any means to cope with it, the grounds around the general hospital being too limited to allow of the erection of the pavilion sheds necessary ; besides, the district around the present hospital has of late almost doubled its population, consequently the necessity of removing it to a less inhabited place is more urgent.

5. Your Board has had under its consideration for some time the proper means of removal and disposal of the contents of vaults and closets, etc., and have thoroughly agreed that, considering our position with regard to the sewers, the odorless system is the true one, and we are now in treaty with one of the odorless excavating companies of the United States to introduce a branch of their establishment to this city, which we consider will be a great boon to the citizens, as well as the means of securing a much better sanitary system.

6. The disposal of refuse has also engaged our attention, and the means we suggested is for the city either to purchase or rent a suitable place where all such matter can be deposited, and such as can be incinerated. At present our system is vile, but the limited means at our disposal prevents your Board taking action on this point.

7. Your Board recommends the Council of next year to consider the advisability of appointing a Medical Health Officer, for the Health Inspector having so many duties to perform, it is impossible for him to continue to discharge satisfactorily his functions as a sanitary officer.

8. Your Board regrets having exceeded the appropriation of \$500, placed by the Council at its disposal, but when it is known that nearly one-half of that amount was expended on the one case of small-pox, your Board has endeavoured with the limited means at its disposal, to discharge diligently the duties devolving upon them.

All of which is respectfully submitted.

JAMES COWAN, Chairman.
JNO. M. KEARY, Secretary.

CARLETON.

Ottawa City.

MEDICAL HEALTH OFFICER'S REPORT.

In compliance with the requirements of the By-law enforced by Legislative enactment in all municipalities of this Province, I now beg leave to lay before you my annual report for the current year up to the 31st of October. In so doing it affords me much pleasure to have it to state that for the past ten months the medical constitution of your city has been remarkably good, its population having been comparatively free from epidemic diseases generally; and, as will appear by comparative statements here given, notwithstanding our marked increase of population, the total mortality for the last ten months has been less than during the corresponding period of last year. There have been, however, a few cases of Scarlet Fever, occurring sporadically during the spring months; these were generally of a mild type, so were also a number of Typhoid Fever cases, which have made their appearance now and again since the latter part of August last.

So long as our subsidiary drainage is not perfected, and so long as the people are indifferent or neglectful to remedy the defects of house drains that are in many instances worse than no drain at all, we must expect the occurrence of such diseases, as the unavoidable penalty attached to such violations of the laws of health. I cannot lay too much stress on this matter of defective drainage, believing, as I do, that it is one of the most prolific causes of disease. It must be conceded, however, that we are moving in this respect; though slow here as elsewhere the people are to comply with the requirements of the laws of sanitation, I have viewed with pleasure the substantial sanitary improvements achieved during the summer months, in the way of public and private drains.

I very much regret, however, that a scheme put forth with a view of effecting the thorough drainage of St George's Ward had to succumb to adverse interests, and for the time being had to be abandoned. The vital importance of this question of drainage is so well understood by all sanitarians, and it being further a well recognized fact that such works require special supervision, in most cities a properly qualified person is employed to examine all buildings for the purpose of ascertaining whether the drainage and plumbing also have been or are being carried out in conformity with health and sanitary laws. The services of such a person have become indispensable here in this city, when it often occurs that imperfect workmanship, even with the best of material, does insidiously, as it were, sow the seeds of diseases in our midst. I would therefore respectfully urge the securing of the services of such a person, as, in my estimation, would largely contribute to the diminution of preventable diseases among the people.

With regard to the management of contagious diseases, being convinced by experience that isolation is the most effective means of preventing their spread, two hospitals set apart for the reception and care of such cases are maintained at public expense within the city, and I am in justice bound to say, are kept in a good state of efficiency. I beg to call the attention of medical gentlemen practising within the city to the desirability of availing themselves of these institutions whenever the security of the well-being of the community demands it, as it is a well-known fact that effective isolation at domicile in private practice is always a most difficult matter, and in very many instances an impossibility. In connection with this question it affords me much pleasure to record the fact that the public school authorities, actuated no doubt by the consciousness of their responsible position, have caused their truant officer to report all contagious maladies

occurring to any or in the family of any of their pupils, and will not allow the readmission in school of any child from where such diseases have existed, unless previously provided with a certificate from me to the effect that it can be permitted with safety. I regret that I cannot say as much for the vigilance of the separate school authorities. Whether their truant officer reports to them any such cases occurring among their children, I cannot say, but though requested by me to do so, that officer has never reported a case to me, nor have I ever been asked for a certificate by any child for readmission to the separate schools.

I have during the past year been frequently called upon to inspect the condition of dwelling houses rendered unhealthy through defective drainage, and so far as lay in my power had the evil remedied wherever possible. Low-lying lots in various parts of the city, whereon water would accumulate, thereby to a degree becoming dangerous, have been drained whenever situated within reasonable distance of any sewer or drain; but I have been powerless in many instances, owing to the fact that said lots were too far removed from any street drain. In order to prepare for the emergency of the advent of Cholera on this side of the Atlantic, the services of two additional men were secured for the space of one month, by the Board of Health, and these were detailed to make as thorough a house to house inspection as could be made during that time to effect the removal of all objectionable matter from yards and outbuildings by enforcing a general cleansing of the same. Blank books were supplied to these men, and they were instructed to report as follows: The condition of yards, privies, the mode of drainage, if any, and whether or not water was present in the cellar of the dwelling house. It will be readily ceded that it would require two men more than one month to make as thorough a house to house inspection, as would leave nothing to be desired in a city of 30,000 inhabitants. As a proof, however, of the value of the services rendered, 416 privies were reported as needing the services of the night soil removers, 129 yards as requiring the scavenger's cart, and water was reported as existing in 110 cellars, chiefly in the lower parts of Ottawa and By-wards, where there were at the time no street drains available. I gladly record the fact, however, that most of these insanitary conditions have been removed so far as practicable during the last summer. This important matter of the removal of excreta is done here by what is known as the pail and barrel system, which, though not the least objectionable, is the only practicable one where the small privy pit prevails so extensively. The work is done under the supervision of two Inspectors—one for each section of the city—who are careful that it is done in as cleanly a way as possible, being also watchful that the public is not imposed upon in the payment of the same. These officers are also directed to report all defective privy vaults, with a view of causing proprietors to have the same rebuilt in accordance with the health By-law. It is very much to be regretted that more people do not use the dry earth closet, as it is easy of management and, after all, the best in the world in a sanitary and economical point of view, inasmuch as it prevents the pollution of water and utilizes, this matter to fertilize the soil, thus serving a double purpose conducive to the welfare of the human family.

It is well that we have a plentiful supply of pure water uncontaminated and beyond pollution by privy pit or cesspool, for, though objectionable, these unfortunately must remain until such time as proper street drains are made in connection with the main sewer; in fact it is better that they should remain than to use for the purposes of water-closets the loosely made dry stone sewer existing in many of our streets. In fact, no permit should be granted to enter these drains for such a purpose.

It is a matter for congratulation that we have this last summer escaped the invasion of Cholera, which is even now making such sad havoc in European countries. We may not be so fortunate next summer, however, as in all probability this terrible pestilence will, with renewed activity, spread to other countries when the frosty winter season is past and gone.

It then becomes the imperative duty of every municipality, ay, and every individual in each municipality, to be prepared for such an emergency in order to be capable of battling with some chance of success against this invading enemy. There must be enforced a general cleansing of the surroundings of the dwelling houses before the hot season sets in next summer, all through the city.

All unhealthy conditions within the house, such as the water in the cellar or the escape therein of sewer gases, should be rectified by the making of proper drains whenever feasible, and properly trapping drains already existing.

The disposal of garbage is a matter of no small importance in every well-regulated household. In order to insure proper disposal of this, and to meet the wishes of many in this respect, I would respectfully recommend the employment of scavenger carts, one or two in each section of the city, to gather and remove this matter, thereby preventing the causation of nuisances on the rear vacant lots, or, as it often happens, on the public street; these carts starting early in May, going their rounds twice or three times a week as the necessity would exist, and thus continue until November. They could also be utilized for the removal of dead animals. There is on the shores of the Rideau River, near the outlet of what was formerly the by-wash, a building used for the purposes of hide inspection, also for the storing of the same. I would strongly urge the removal of this outside the city limits, as it has become an intolerable and a dangerous nuisance to the well-being of the inhabitants of that locality. There are also in that neighbourhood three or four slaughter-houses, the removal of which outside the city limits would in my estimation be conducive to the welfare of the whole community in general, and more particularly to that of the people living in that part of the city. In my opinion no slaughter-house should be further tolerated within the city unless by special permit of the Board of Health, and only where all the requirements and conditions of health by-laws have been complied with.

Tables here attached shew the total mortality from all causes during the last ten months, also the respective mortality in each ward, deaths as occurring among Roman Catholics and Protestants respectively, also according to nationality.

All of which is respectfully submitted.

A. ROBILLARD, M.D.

CAUSE OF DEATH.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	TOTAL.
Consumption	9	4	5	6	5	9	6	5	6	7	62
Pneumonia.....	3	7	4	5	4	1	3	1	2	2	32
Bronchitis.....	1	2	...	2	3	1	1	1	...	1	12
Pleurisy.....	...	1	...	1	...	...	...	...	...	1	3
Heart Disease.....	1	1	2	3	2	1	4	...	3	1	18
Scarlatina.....	1	2	4	...	2	...	...	...	...	...	9
Diphtheria.....	...	...	...	...	...	...	...	...	...	...	...
Typhoid Fever.....	1	...	...	1	...	...	1	...	4	2	10
Erysipelas.....	...	...	...	1	...	...	...	...	...	...	1
Pertussis.....	...	...	...	...	...	...	...	...	1	...	1
Pyæmia.....	...	...	...	1	...	...	...	...	...	...	1
Gastro Enteritis	1	...	1	...	...	...	...	...	...	...	2
Apoplexy.....	...	...	...	1	2	1	2	...	1	2	9
Hepatitis.....	...	1	2	...	...	1	1	...	1	1	7
Peritonitis	2	2	2	2	2	1	...	1	1	1	14
Cerebritis.....	3	2	...	1	1	...	2	1	...	...	10
Myelitis.....	...	...	...	1	...	...	...	...	...	...	1
Meningitis.....	...	...	...	...	...	...	...	...	1	...	1
Dysentery.....	...	...	...	...	...	...	...	...	1	...	1
Hydrocephalus.....	1	2	2	8	3	7	8	5	3	4	43
Croup.....	1	...	1	1	1	1	1	...	...	1	7
Dropsy.....	1	1	...	1	1	...	1	3	...	2	10
Nephritis.....	...	1	...	...	1	...	...	1	...	...	3
Cystitis.....	1	...	...	...	...	...	...	...	...	...	1
Paralysis.....	2	1	2	...	2	...	3	1	...	1	6
Asphyxia	1	...	...	...	...	...	...	...	...	...	1
Cancer.....	1	...	...	...	...	2	1	...	2	...	6
Abcess.....	...	...	...	3	...	...	1	...	...	...	4
Drowned.....	...	...	...	2	1	2	...	1	2	...	8
Accidental.....	1	1	1	1	2	1	...	2	1	1	11
Hemorrhage.....	...	...	...	...	1	...	...	...	...	2	3
Infantile Disorders.....	2	5	10	12	17	26	54	29	23	15	193
General Debility.....	6	1	4	3	2	6	8	6	2	4	42
Rubeola.....	...	1	...	...	...	1	...	...	...	...	2
Old Age.....	2	2	1	3	1	2	3	4	...	3	21
Rheumatism.....	1	...	...	...	1	1	...	...	...	...	3
Premature Birth.....	1	...	2	3	1	...	2	1	1	1	12
Still-Born.....	3	3	...	3	...	2	...	7	3	2	23
Cyanosis.....	...	...	1	...	2	...	...	...	...	...	3
Asthma.....	1	1	...	...	...	...	...	...	1	...	3
Scurvy.....	...	...	...	1	...	...	...	...	...	...	1
Tetanus.....	...	...	...	...	...	...	...	1	...	...	1
Poison.....	...	...	...	...	...	...	...	1	...	...	1
Totals.....	46	40	45	65	58	67	103	70	60	54	608

DEATHS ACCORDING TO NATIONALITY.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	TOTAL.
French.....	15	15	27	29	25	30	59	23	32	27	282
Irish.....	16	14	8	14	20	19	24	24	8	16	163
English.....	11	6	7	19	8	17	17	16	15	10	126
Scotch.....	4	4	3	2	4	1	1	5	5	1	30
German.....				1			2	2			5
Others.....		1			1						2
Totals.....	46	40	45	65	58	67	103	70	60	54	608

RESPECTIVE MORTALITY IN EACH WARD.

WARDS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	TOTAL.
By.....	12	18	13	23	32	33	38	17	18	15	209
Ottawa.....	18	6	17	18	13	9	30	18	22	26	177
St. George.....	7	4	8	12	10	8	15	18	5	6	93
Wellington..	8	11	7	12	11	11	16	14	13	6	109
Victoria.....	1	1			2	6	4	3	2	1	20
Totals.....	46	40	45	65	58	67	103	70	60	54	608

RESPECTIVE MORTALITY AMONG ROMAN CATHOLICS AND PROTESTANTS.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	TOTAL.
Roman Catholics.....	30	27	31	44	47	53	78	50	41	41	445
Protestants.....	16	13	14	21	11	14	25	20	19	10	163
Totals.....	46	40	45	65	58	67	103	70	60	54	608

The total mortality from all causes for the first ten months of 1883 was.....	681
For the corresponding ten months of 1884.....	608
Reduction in total mortality, notwithstanding our increase of population.....	73
Out of the total number of deaths from all causes for the last ten months, one hundred and five (105) occurred in the By Ward Foundling Institution or Bethlehem.	
The records of this Institution for the last year, commencing November 1st, 1883, and ending on October last, 1884, show as follows :—	
Infants received during the year.....	138
Carried from last year.....	18
	156
Died during the year.....	133
Placed out.....	11
Remaining.....	12
	156

All of which is respectfully submitted,

A. ROBILLARD, M.D.

LINCOLN Co.

St. Catharines.

CHAIRMAN'S REPORT.

In accordance with the provisions of *The Public Health Act*, Sec. 69, Clause 3, Schedule A, I have the honour to present the first annual report of the Local Board of Health, accompanied by the report of the Sanitary Inspector, up to the 15th of Nov., 1884.

As soon as possible after the organization of the Board, 17th July, and the appointment of the Sanitary Inspector, active operations were commenced.

In order that the general public might be conversant with the provisions of *The Public Health Act*, which most concerned them, your Board had extracts from said Act printed in pamphlet form (a copy of which is annexed), and the Inspector has, in the performance of his duty, delivered about 1,300 copies of the same to householders in the city; in addition to this, the same matter was printed on cards, and placed in hotels, on the market grounds, and in other public places.

From the Sanitary Inspector's report, it will be seen that a house to house visitation has been (or is being) made, and that a large number of complaints have been made of nuisances existing mostly in yards and alleys; but by the prompt action of the Inspector, these nuisances have been removed.

The Board divided the city into two districts, and have appointed scavengers for both districts. Arrangements for the removal of night soil have also been made, and every effort is now being put forth to have all closets, vaults, cesspools, and like places thoroughly cleansed out, in order that the removal of night soil may be as inoffensive as possible. All vaults are disinfected before being cleaned out, and the contents placed in barrels with tight fitting covers, and taken out of the city limits.

During the hot weather frequent complaints were made to the Board of the foul stench of the open drains on the south side of James street, near St. Paul street, also on the east side of King street, between Helliwell's Lane and James Street. The nuisances which exist at these points are caused by defective grades. On King Street the nuisances complained of are caused by the too free use of water. The occupants of the stores used for the sale of meat should be compelled either to have connections made between their premises and the sewer, or else desist from throwing so much water on the street.

The health of the city during the past year has been good. We have been spared from any epidemic, and, with the exception of Typhoid Fever, have been free from contagious or infectious diseases.

One case of Scarlet Fever (imported) was reported to the Board, but by perfect isolation and the proper use of disinfectants the disease was stamped out.

Diphtheria has not existed in the city since the formation of the Board, but immediately before that period one case which proved fatal had occurred. This case the physician in attendance attributes to bad well-water.

Typhoid Fever has been quite prevalent, but at present no new cases are being reported. The cases reported were as follows :

In August	2
“ September	2
“ October	14
“ November	17
	35

Of these, four have been reported as having terminated fatally. This latter return is not correct, as your Board find from the Board certificates filed with the City Clerk that four additional deaths occurred from Typhoid, making in all eight fatal cases. This discrepancy is caused from the fact that some of the medical men of the city have not made the necessary returns of the result of their cases, as required by the Health Act.

The Board find that the citizens generally are willing to comply with the regulations imposed upon them by the Health Act, and as yet the Inspector has not been obliged to enforce the penalties of the law.

GEO. C. CARLISLE,

Chairman Board of Health.

SANITARY INSPECTOR'S REPORT.

In accordance with the *Public Health Act*, I beg leave to submit the following report of work done since my appointment as Sanitary Inspector by the City Council, on the 27th of July last.

As soon as I entered upon the duties of my office, I made a thorough inspection of all streets, lanes and alleys, and caused the persons who had deposited rubbish or other filth in these places, to remove the same, and where necessary to use disinfectants.

Complaints of nuisances to the number of 290 were made, and on examination many were found to be of a serious nature, and well calculated during the hot weather to be most injurious to the public health. These nuisances were in every case abated, and the premises put in a cleanly condition.

On the receipt of the necessary books, which are published by authority of the Provincial Board of Health, I began a house to house inspection and have visited 331 premises, noting the conditions provided for in the Inspector's book. In many places I found the cellars wet, unventilated, and the foundations in a state of decay.

Very few residences have cess pools or drainage connections with sewers for carrying off house slops, etc., such matter being thrown into the yards filling up the ground with noxious matter, which, through the nature of our soil, must find its way into the wells ; and in dry seasons such as the present, no doubt is the cause of much of the sickness and malarial troubles which have prevailed in portions of our city.

The privy vaults, as a rule, I find in a shocking condition ; caused the same to be well disinfected, and have ordered them to be cleaned out as soon as the weather will permit.

The thirteen cow-byres, which contain 110 cows, received my early attention ; some of these were not well kept, but at present they are all clean and in good order. I have at the suggestion of the Chairman, made a special inspection of the source of water supply for the cattle kept in the byres. I find that ten use well and canal water, and three, city water.

I am happy to state that the fodder provided for the cows is good, and that there are no swill-fed milch cows kept in the cow-byres in the city, but that some cattle are fed on brewer's grains.

Very few milk-sellers have as yet made application for permission to sell milk in accordance with the Act. And I would suggest that the Board take action in this matter at once, in order that all of these persons may come under regular inspection.

After the necessary forms for reporting contagious or infectious diseases were procured, I distributed the same to all the medical men of the city.

I have inspected all the slaughter-houses and butchers' premises, and found them clean and well kept.

I have also been on the market regularly, and have not found any meat, or other article, offered for sale that was unfit for food.

During the season I caused to be removed out of the city 130 hogs; many of the pens were in a filthy condition, and a great source of annoyance to the neighbourhood in which they are located.

As many of those pens were in close proximity to doors and windows, I caused eighteen pens to be entirely removed, and eight pens to be placed in positions in accordance with the Act. Many of the hogs were running in lots.

Many of the wells are undoubtedly impure, as they are close to cess-pools and privy vaults. On one premises, where three cases of typhoid fever existed, the well was surrounded, within a radius of twenty-five feet, by not less than seven privies.

Out of the 331 premises inspected, I find that 155 use wells; forty-one had no water at all, and the balance use city water.

As the season for cleaning vaults is at hand, and scavengers have been appointed, I propose to see that those places are thoroughly cleaned out, and their contents shall be disinfected before removal.

Thanking you, gentlemen, for your assistance to me in the discharge of my sometimes unpleasant duty,

JOHN C. CLARK,
Sanitary Inspector.

YORK.

City of Toronto.

REPORT OF THE LOCAL BOARD OF HEALTH.

To the Council of the Corporation of the City of Toronto :

The Local Board of Health begs to submit herewith, in compliance with the provisions of *The Public Health Act, 1884*, the Annual Report of the Medical Health Officer, which contains a detailed statement of the work of the Board during the year, and full information as to the sanitary condition of the Municipality.

Respectfully submitted.

JOHN BLEVINS,
Chairman.

MEDICAL HEALTH OFFICER'S REPORT.

To the Chairman and Members of the Local Board of Health :

GENTLEMEN,—I have the honour of submitting the following report upon the sanitary condition of the City of Toronto, in accordance with the requirements of *The Public Health Act*. Such a report, with regard to a city of the dimensions of Toronto, must necessarily be of some length, especially when it is the first report presented; but in its preparation I have endeavoured, while dealing with the many important sanitary questions, to make it as brief as the importance of the questions considered would permit.

During the summer months eight policemen were detailed to act as Sanitary Inspectors under my instructions and guidance. While thus employed they made a house-to-house inspection, and attended to such complaints as were made to the Medical Health Officer.

The Inspectors thus appointed asked at each place visited the following questions :—

1. May I inspect your house and premises ?
2. What is the name of the occupant and owner or agent ?
3. What provisions exist for drainage, and what is the condition of the cellar ?
4. Is city water in use ?
5. Have you water-closets or privies, how many, and what is their condition ?
6. Have you a well or cistern in use, or not used, and what is the character of the water ?
7. How do you dispose of the kitchen and chamber water ?
8. What do you do with the sweepings and refuse of the house from day to day ? Are they given to the scavengers regularly ?
9. Have you any complaint with regard to your place or neighbouring premises ?
10. Do you keep any animals ? If so, what is the state of the stables ? How often is the manure removed ?
11. What is the state of the yard ?
12. How many inmates are there ?
13. In factories and other industrial establishments, how many men and women are employed ? How many hours of work ? Have the women separate closets ?

The total number of places visited was 5,181, a little over one-third of the number inspected the previous year. The following is a tabulated statement of the results :—

Premises drained	3,471
Premises not drained	1,207
Premises having defective drainage	503
City water in use	4,006
Number of wells	655
Number of foul wells	201
Number of cisterns	842
Number of foul cisterns	228
Number of houses having water-closets	873
Number of privies	3,374
Number of privies drained	684
Number of full privies	814
Number of foul privies	570
Slops thrown in privies	739
Slops and refuse thrown in streets and lanes	668
Number of unclean yards	316
Refuse burnt	858
No water in use	145
Unclean stables	39
Cow byres	52
Dirty cellars	134

Private Drains.—It will be seen that out of 5,181 places inspected, 1,207 had no drainage and 503 had defective drainage. The City Engineer's record shows that in 1883, up to the 27th October, 793 private drains were constructed. During the same period of 1884, 870 private drains had been put in, showing an increase of 77. Drains with sinks for the waste water of the house are essential, not only to keep the yard clean, but also the streets and lanes. When these are wanting the house slops must be thrown either over the yard or into the lane or street, or perhaps a culvert.

Water Supply.—In connection with the 5,181 places visited, 655 wells were found existing, of which 201 were foul. There were 842 cisterns, of which 228 were foul. The foul wells and cisterns ought, obviously, to be filled in. With regard to the wells not

reported as foul, I wish to submit that, although the water may appear pure to the senses of sight, smell and taste, it does not follow that it is not impure and dangerous to drink as reported last year.

In this connection it is desirable to refer to the state of the city water. It would be an outrage to demand a general closing of the wells if the city water be not potable. This Board will remember that Mr. Carpenter, a distinguished scientist of Edinburgh, when here last summer, took samples of water at certain points in the bay, and from the tank at the end of the pier, also from the engine-house well at the water works, and submitted them to a test which he said could be relied upon. Of course it was not necessary that he should tell us the water of the bay is foul; that is well known. But it was of vast importance to know whether the water at the bell-buoy, where the city water is taken, and that in the tank at the shore end of the pipe lying at the bottom of the bay, and in the well of the engine-house were pure, or at least safe to drink. It will be remembered that Mr. Carpenter's report was not satisfactory. He said, "the water as drawn at the bell-buoy is by no means free from contamination by sewage and other organic matter. That this water becomes mixed on its passage from the bell-buoy to the pumping-house with bad water in the bay, probably from breaks in the pipes and in the well at the bay end of the wharf of the pumping house." He also reported the water from the pumping-house well as not free from organic matter. Dr. S. McAdam, another distinguished scientist of Edinburgh, who inspected the water works and water supply, reported that the water he took from the tank and pumping-house well was not pure. Subsequently to these inspections, at the request of Mr. Ald. Walker, I took samples of water at the bell-buoy, at points one mile, two miles, and three miles out in the lake, and submitted them to precisely the same test as that employed by Mr. Carpenter; the result was that the water at the bell-buoy was found as pure as that three miles out in the lake. At the last meeting of the Board I reported: "It will be a cause of gratification to the citizens to know that the water at the bell-buoy is quite as pure as that taken three miles out." But while such was the condition of the water on the day the samples were taken, there is reason to fear that the source of the water supply is not equally good. We cannot be sure that, at certain times, from the action of the wind and currents, the polluted water of the bay does not find its way to the bell-buoy. However this may be, there is sewage poured into the lake west of the western gap. There is the considerable discharge from the Garrison creek, the fort, from the exhibition grounds, and the large amount of sewage from all of Parkdale, which empties into the lake by the Dufferin street sewer. There are grave reasons to apprehend that the aggregate of the sewage poured into the lake west of the bay may flow at times to the bell-buoy, in a sufficiently concentrated form, to render the water impure. Then there is constant danger of leakage of the pipe in the bay. These are considerations of pressing importance which I respectfully submit to this Board. On the 11th of the present month I took samples of water from the engine-house well and the tank at the end of the bay pipe. These were found to be, although not entirely free of organic matter, of such a character that I unhesitatingly say that this water is preferable to any well water in the city. However, in view of the facts I have stated about the possible contamination of the lake water, I am not now prepared to recommend that every well in the city shall be closed. At the same time there are so many obviously foul that some means should be taken to have those which are polluted closed up.

The tables stating the immediate fruit of the Inspectors' work show that 79 foul wells and 94 foul cisterns were filled this summer. But this is not a complete record by any means. At the same time water service has been largely introduced. The Sanitary Police were the means of having city water put in in 62 places, and the water works department shows that water service has been laid during the present season in 2,000 places, being an increase of nearly 240 on the number of the preceding year.

Water and Privy Closets.—In 873 places of the 5,181 visited, closets with water service were found existing. The number of water closets in each place is not given. In the same districts were found 3,874 privies; of these 814 were full and 570 in a foul condition, over and above the ordinary offensiveness of privy pits; and in 739 instances slops and refuse were habitually put in the privies, thereby increasing the foulness.

The question presents itself: in what way shall the excreta of Toronto be disposed of? In considering the question thought must be taken of the future; not remote, but immediate. Everything indicates a very rapid growth in the dimensions and population of this already great metropolis. To continue to pour the sewage into the bay is to place the citizens in constant jeopardy, and invite disease and pestilence to our homes. The assessment for 1885 shows a population of 104,276. Soon Parkdale will be added, with a population of 3,000, making a total of 107,276.

Toronto Bay.—The present condition of Toronto Bay is a disgrace to the city, and calls loudly for attention with such speed as the magnitude of the matter, and the evident difficulties in the way, will permit. The limpid bay of half a century ago, and even many years later, has been converted into what is little better than a cesspool.

The question of the disposal of sewage for Toronto is a problem which shortly must be solved. The city has outgrown the provisions made for the sanitary requirements of civilized life. The fact that last year there existed within the city 14,148 privy-pits alone, shows much requires to be done. And yet, if the yearly contents of these pits be put in the bay, the abomination will be greatly increased. But a privy-pit, except in a rural district or small village, is most objectionable; so much so, that of two evils—retaining the privy-pits, or adding to the foulness of the bay, the last, in point of immediate danger, is the least. The question naturally presents itself: Is it necessary to have either evil? If the sanitary welfare of the city demands that privy pits shall be abolished, what shall the substitute be? The water closet—that is a closet with water service—has been of late rapidly taking the place of the privy. But the earth closet, properly managed, has some important advantages, and is, doubtless, preferable. Water carriage implies a great waste of material extremely valuable as a fertilizer.

There are within a short distance of Toronto waste lands which could, by the aid of this very substance, be made fertile fields. How much better this would be than sending the matter to waste and to poison the water, is quite evident. The earth closet seems to offer the best means of preserving so valuable a fertilizer, and at the same time securing the public against a growing danger, due either to the existence of privy-pits or to the water-carriage system. How far the system can be adopted in Toronto may be questioned. To carry it out effectually, a sufficient quantity of mould or ashes is necessary to absorb all the moisture of the excrement. To supply this and as well remove the resulting manure is thought by excellent authority to be impracticable in a place the size of Toronto. But undoubtedly a large number of houses could be thus treated; the more the better. It is gratifying to know that the number of earth closets is increasing. If we accept this statement that the water carriage system must, at least to some extent, be continued, then something requires to be done to procure other disposal of the sewage than sending it into the bay. This cannot be allowed to continue. It is bad enough now, but when the breakwater is completed, and the eastern gap is reduced to some 500 feet, the channel by which the sewage may be carried out into the lake, and the lake water into the bay, will permit but little commingling of the contents of the bay and the lake water. This, with a rapidly increasing population, must lead to a degree of foulness which cannot be endured. As a remedy it has been proposed to construct intercepting trunk sewers, two or more, extending eastward, by which the sewage may be conveyed to a point where it would not endanger the water supply of the city.

Earth Closets.—In my report adopted by this Board on the 16th September, I pointed out the health value of earth closets as a substitute for water-closets or privy-pits. I have just stated that a high authority regards the universal use of earth closets in a city the size of Toronto as impracticable, but there is reason to doubt the correctness of this view. I have been unable to procure any reports on the subject, but I am credibly informed that in Melbourne, Australia, and in several cities in England, all with a larger population than Toronto, this system has been found to work satisfactorily and with decided benefit. The excreta is all disposed of without causing a nuisance and with a money outlay not burdensome.

The number of earth closets is increasing in the city, but in order that they may come into general use it will be necessary to have a by-law making it compulsory, or to educate

the people to recognize its value. I submit that this Board might consider the best mode of securing this much needed reform.

Deposit of Garbage.—The matter of disposal of garbage is one of great importance. Clause 4 of the By-law says: "No person shall within the municipality suffer the accumulation upon his premises, or deposit, or permit the deposit, upon any lot belonging to him of anything which may endanger the public health, or deposit upon, on, or into, any street, square, lane, by-way, wharf, dock, slip, lake, pond, bank, harbour, river, stream, sewer, or water, any manure or other refuse, or vegetable or animal matter, or other filth."

It is evident from this that the practice hitherto pursued in this matter is now contrary to law; a law fully in accord with the necessary sanitary security of the city. I need not take space to point out the various ways in which such deposits may lead to sickness and fatal disease.

In order to efficiently and safely dispose of the city's garbage, I submit that the plan now coming into use in England, and some places in America, be adopted. The mode is to consume the organic matter by a furnace. This crematorium has been found to answer its purpose in a very satisfactory manner.

The cost of a furnace to fully meet the requirements of Toronto would, I think, be less than \$2,000. In Hamilton, where they are in advance of Toronto, the contract has been let for a crematorium at a cost of a little over \$700. In consideration of the great benefit as the destruction of matter so highly dangerous to public health when allowed to gradually decompose, the question of cost should not for a moment interfere with the introduction of so necessary an adjunct to the city's welfare.

Slaughter-Houses.—In the month of August the Sanitary Police were instructed to inspect the slaughter-houses in the city, and to ascertain at how many butcher shops any slaughtering was done. From their reports I learned that some of the slaughter-houses were far from being in a proper sanitary condition. They exist mainly in the west end and east of the Don.

Out of all reported upon, only two appeared at all satisfactory. There are a number east of the Don which were not inspected for want of time. But there is one situated at the mouth of the Don, on the west side, which has been visited time and again, to which I wish particularly to refer. On the 6th November I last visited this place. So far as the interior of the building is concerned but little fault can be found. There is slaughtered here from 30 to 35 cattle each week, besides some sheep; the blood and water arising therefrom is all poured into the Don. The construction for holding the offal, which is taken away every night; the box drains, for carrying the blood and frequently pieces of offal to the Don, and the ground around, are all in a very foul state, and a fruitful source of danger to the public health. The space between the building and the stream is considerable, and is all saturated with organic filth. I beg to recommend that steps be taken to have this great evil removed or abated before summer again comes round.

The Inspectors were directed to ascertain to what extent the butchers along the principal streets were in the habit of slaughtering on their premises. I received reports of 15 places; of these it was admitted at five that they killed from time to time calves and lambs. The other ten denied ever doing so.

I submit that no slaughtering should be allowed in connection with the butcher stalls. Saturation of the ground or wooden floor with blood is highly objectionable. Nothing is more dangerous than decomposing blood under such circumstances.

I desire to submit that it would be to the interest of the public health if an abattoir or public slaughtering house were established. This should be situated in a place judiciously selected, and should possess all the appointments necessary to prevent a nuisance, which can be done.

Cow-Byres.—Clause 10 of the By-law directs that: "All milch cows and cow-byres, and all dairies or other places in which milk is sold or kept for general use, and all cheese factories and creameries, shall be subject to regular inspection under the direction of the said Board, and the proprietors shall be required to obtain permission in writing from the Board."

During the last few weeks I have personally visited upwards of 25 places where cows are kept and milk sold. My attention was directed to the number of cows in each place,

their age, state of the udders, nature of food used, when fed and milked, daily quantity of milk, the condition of stable and premises, and the water supply. Of those visited, the stables and premises found in a satisfactory state numbered four, ten were medium, and seven in a bad state. The drainage that is to carry off the fluid excrement was satisfactory in six places, in nine bad, and in eight medium.

With regard to the nature of the food given to the cows little or no fault could be found. Slops from the distillery which were formerly largely used are now given at only three places visited, but grains from the brewery are generally in use. Other articles of food are given, all of which are good. No water alone is given, but it is mixed with bran or shorts. In 13 places city water was used, in six well water, and in three cistern water. Believing, as I do, that there are few, if any, wells of pure water within the city, the use of well-water must be condemned, also the use of water from the cistern.

It will be seen that out of the 25 places visited in only six were the premises in a proper condition, and only in nine was the drainage satisfactory. If, however, the law was enforced and no one allowed to keep cows without a written permission from this Board, the most flagrant evils would doubtless be remedied. But I would respectfully submit that cow-byres within a limited area of the city should not be allowed under any circumstances.

Toronto Island.—It requires no argument to show that the Toronto Island as a summer resort for the purpose of obtaining rest and fresh air should be free from everything which might counteract the benefit derived from breathing the pure air from the lake. The population of the island in summer is about 800, besides the large number who may daily visit the place. The quantity of excrement, solid and liquid, derived in this way is considerable, and it becomes a matter of great importance how it shall be disposed of without becoming a nuisance and inimical to the health of the public. On visiting the island in midsummer I found a most offensive nuisance at Hanlan's Point. Under my directions this was removed. The Sanitary Police inspected other parts of the island and found a foul condition of privies in several places. Although these evils were for the time being abated, others will occur next season unless something be done to prevent them. The question is, how shall the excreta be disposed of? To continue to befoul the lagoons and the surface of the island will be most reprehensible. The sand cannot absorb any organic matter, as water is found a short distance from the surface. There is no soil to act upon the solid excreta to render it innocuous. There seems to be only one way to effectually deal with the matter. Every house, public and private, should have an earth closet. The closet should receive both solid and fluid excrement, and a sufficient quantity of mold or earth must be added from time to time to completely absorb the fluid. By this means foul smells will be prevented, the surface of the island will not be polluted, and at the same time, provided an adequate amount of mold is used, a most valuable product will result, free of offence, which can be used to convert the barren sand into a fruitful garden. In order to secure this most desirable end it would be well to have scows provided for carrying over the earth. The expense attending this would be of little importance compared with the benefit which would accrue to the citizens who look to the island as a place of healthful resort. I beg respectfully to urge this important matter upon the Board of Health. At the same time those living on the island must keep separate the ashes and the refuse of the house, the refuse to be carefully burned, while the ashes could be put in the earth closet.

Requirements of the Medical Health Act.—I beg respectfully to draw the attention of the Board to the 28th section which says: "It shall be the duty of every Local Board of Health to cause to be made from time to time inspection of its district in order to prevent the accumulation within the district of any dirt, filth, or other thing which may endanger the public health, and with a view to ascertain what nuisances exist calling for abatement under the powers of this Act, or of the Revised Statute respecting the public health, and to enforce the provisions of this Act and the said Revised Statute in order to abate every such nuisance."

The systematic inspection during the summer by the Sanitary Police was accomplished by favour of the Chief of Police. They were liable to be withdrawn at any time, in fact were withdrawn during the period of the Exhibition, and a few weeks later were again

withdrawn before their sanitary work was half completed. It seems evident that this uncertain way of inspection by policemen, who are by no means under the control of this Board or its officers, does not meet the explicit requirements of the Act. It is submitted that the City Council should furnish the necessary means for this Board to make the inspection, and enforce the law in accordance with the Health Act.

Inspection of new houses.—The necessity of having systematic inspection of new houses is obvious; several cases have come under my notice this year where new tenement houses were deficient in drainage and properly constructed privies, and in many other respects.

By-law 14, Rule I., says that: "No privy, vault, cesspool, or reservoir into which a privy, water closet, stable, or sink is drained, shall be established until the details of such establishment shall have been submitted to and obtained the approval in writing of the Medical Health Officer."

This requirement of the Act has been quite neglected so far, and the law in this respect cannot be enforced until the Medical Health Officer is supplied with regular inspectors. This By-law, however, should be altered so as to forbid the construction of such pits altogether.

In the matter of plumbing, there should be a By-law requiring the plumber to submit his plans to this Board for approval, and to be kept on file for reference. This work should not be covered until inspected by a competent person, and all pipes and appliances should be so placed that they can easily be inspected at any time. Not a few instances have come under notice in which the most culpable negligence has been discovered. Without any reflection upon the plumbers as a class, it is most necessary to have such inspection and provision. Some plumbers are ignorant of the principles of correct plumbing; but there are also plumbers who wilfully deceive, and become really guilty of manslaughter. Sometimes those who pretend to know the most about sanitary plumbing, and advertise themselves as sanitary plumbers, are the worst offenders.

A number of persons engaged in the business of buying and curing the fresh hides of animals conduct it in places where, during the summer months, it can hardly fail to be a nuisance to many, not only the neighbours, but passers-by. Many complaints have been made of these places. Efforts, I know, are made to keep them in a sanitary condition, but without avail. I submit that a by-law should be passed forbidding the receiving of green skins, except in places approved of by this Board or the Medical Health Officer, between the 1st of May and 1st of October.

The Cholera.—The recent outbreak of cholera at Paris is a warning to the American continent as well as to Europe. If the disease reaches America it is almost certain to visit Toronto. I cannot allow the fear of being considered an alarmist to prevent this note of warning. I may use the words of Sir Robert Rawlinson, C. B., President of the Sanitary Institute of Great Britain, in his opening address at Dublin, on the 30th September last. What he says of certain places in England and Ireland unfortunately applies to Toronto: "The seed-beds of cholera have not been cleansed; the crowded tenements have not been lime-washed and ventilated; the filth-sodden, corrupt surfaces and sub-soils remain occupied; and polluted water is used. Attempting to shut out the cholera from such areas is attempting the impossible." At the same time he said, "In commenting on cholera it must not be forgotten that this disease is not so destructive as the ever-present fever under its various forms. Typhoid is answerable for more deaths than cholera."

WM. CANNIFE,

Medical Health Officer.

TOWNS.

WATERLOO COUNTY.

Berlin.

MEDICAL HEALTH OFFICER'S REPORT.

In congratulating the municipality in the formation of a Local Board of Health, agreeably to the desire of the Provincial Board, I am of opinion that to facilitate their labours, and render the necessary duties of each member as light as possible, the report of the Medical Health Officer upon the sanitary condition of the town will be desirable. I therefore beg to lay before you a statement of my experience and impressions during the last summer. They are generally amongst the foremost in urging proper legislation for the preservation of health in Berlin.

As it has been demonstrated that to dampness in habitations and localities the beginning of consumption can be very frequently traced, and as this is probably the most important disease we have to contend with in Canada, it cannot be too strongly impressed upon the minds of the people that as subsoil dampness makes the site of any habitation incompatible with comfort and the duration of life, the first care in the preparations of the abodes of man should be proper drainage of the soil. It is to be feared, too, that underneath some of the houses of the town, there is, if not collections of water, a certain chronic dampness that is surely fraught with untold danger—so many persons unconscious of its proximity; diseases of almost every kind can be traced to this source and I would warn heads of families to look well into the matter and make the exclusion of dampness one of their first household duties. It is very desirable to impress upon householders that there is great danger in connecting house-drains, water-pipes, etc., with a sewer or general drain without a proper trap, as if not properly protected by the trap obnoxious gases will find entrance into the dwelling by means of the said pipes, etc. The water supply of Berlin is a possession of which a great many feel proud, but I may venture an opinion upon this matter. It is a well-known fact that sickness may be caused by drinking impure water, and as really pure water is never found in nature, the next thing to be done is to secure the best we can. Wells at any time, and particularly those in thickly populated towns, are always polluted, as the porous earth is continually absorbing filth, which, if explained at length would horrify those at present ignorant of the fact; and this is continually soaking into the "splendid well" so frequently spoken of by many, which may contain the products of decomposing nitrogenous matters as well as the specific germs of disease that may have filtered from neighbouring privies. Well water may be bright, cool and sparkling, and yet contain those matters which are a frequent cause of bowel complaints, Typhoid Fever, etc. Therefore, I would strongly recommend all parties having wells in use to see that they are properly cleaned out as well as thoroughly secured at the entrance, and as far removed from any cess-pool, privy, etc., as possible, (as the idea that water filtering through the earth renders it pure is an erroneous one), until a proper supply outside of wells can be secured by the people; and I feel confident that the Council at no very distant day will see fit to have a proper supply of pure water supplied to the town in order to keep pace with our rapid growth and general prosperity.

Another important matter, which should in no case be overlooked, is the removal of excreta. True, quite a number of our residents have adopted the earth closet and there can be no doubt that with our limited supply of water these are the most suitable for our towns, generally. Quite the largest proportion of our inhabitants still retain the old style of privy-pit, and nothing is a greater hindrance to sanitary perfection than this, as in most cases they cannot be properly cleaned and disinfected. Therefore I would impress upon every householder most forcibly that the old style of privy-pit should be entirely discarded and the earth closet brought into use exclusively. The disposal of garbage is

another important matter, in which every householder should be interested, and although steps have been taken by quite a number of the residents to have this properly stored and removed, still, I have seen in a great many instances it is carted about the streets in open vessels, which, to say the least, looks very disgraceful. The Board of Health deserves great credit for their untiring energy in spite of strong opposition, in succeeding in having one of the most dangerous and at the same time disagreeable nuisances, viz., the slaughter houses, removed outside of the corporation.

Berlin has three splendid schools, and it speaks volumes for the vigilance and care of the head masters and teachers that they have succeeded in excluding contagious and infectious diseases. The precautionary steps taken by the authorities have been so far successful, that contagious diseases have been almost unknown to us; and although solitary cases have been known, in no instance has the infection spread. I cannot conclude this report without paying a tribute to Mr. Charles Quirmbach, the Health Inspector, for the zeal he has displayed in looking after the sanitary condition of the town, and having nuisances removed with all available rapidity within his power.

H. G. LACKNER, M.D.

Medical Health Officer.

NORTHUMBERLAND AND DURHAM.

Bowmanville.

SECRETARY'S REPORT.

I regret that your circular of 21st October has received no notice till now. It was referred to the Chairman of the Board, and he has been from home.

We have but little to report from this town. A Board of Health has been maintained here for a number of years, and it has been customary to make a pretty thorough inspection of the town once a year, as soon as the ground was settled in the spring, and see that offensive and injurious matter was removed, and to give prompt attention to any complaints made at other times; but besides re-organization of the Board, pursuant to the provisions of the Act of last session, it has not been deemed necessary to do anything in addition to what was done in former years, as this is an unusually healthy town. Next year the Local Board will doubtless be prepared to enter into any general measures that may be deemed necessary to fortify the country against the dreaded approach of Cholera.

R. WINDATT,

Secretary.

PEEL.

Brampton Town.

SECRETARY'S REPORT.

Board legally constituted. Appointed an Inspector who had thoroughly examined the greater portion of the town, and regularly made a report in the note book and attended all the meetings of the Local Board, giving explanations, and his advice in several instances. He receives \$2 per day.

We have not appointed a Medical Health Officer, although we have a physician on the Board.

The Board is satisfied of the sanitary condition of this town as compared with many others. It has been properly attended to by the Board and by the Inspector. I find written up in the note book (60) cases with the various replies, filled in pretty fairly, which book will be forwarded to you if you say so.

JOHN McCULLA,

Secretary.

KENT.

Chatham.

SECRETARY'S REPORT.

Mr. Edward Robinson was appointed Chairman of the Board.

The Secretary was instructed to apply to the Provincial Secretary for more copies of the Health Act, also some pamphlets *re* disinfectants.

The Secretary was instructed to recommend to the Town Council the appointment of the police as Sanitary Inspectors.

It was ordered that the Sanitary Inspectors make a general inspection of the town and report to this Board at the next meeting of any violation of the sanitary laws, and that if the police be appointed as such Sanitary Inspectors, the Chief shall keep a book in which to enter all complaints against sanitary laws.

The Secretary was instructed to procure the necessary number of notices for distribution among the physicians to report cases dangerous to public health.

The Secretary was instructed to request the Council to appoint a public scavenger.

The Secretary was instructed to procure a book in which complaints can be entered respecting nuisances.

The Inspector was instructed to distribute the pamphlets respecting disinfectants.

The Secretary was instructed to procure ten copies of the several copies of the minutes of the orders or instructions issued by the Provincial Board of Health.

It was resolved to petition the Council to provide immediately a suitable place for the reception of night soil, and all other refuse that may be found necessary to be removed from any street or premises in the municipality.

The several complaints in the report book were read, and the Inspector reported that he had attended to all of them.

The Chairman recommended that complaint No. 5 be further looked into, especially as to the cause of the complaint being made, and that the names of complainants be entered in the book hereafter. Adopted.

The Chairman also drew the attention of the Board to the false and exaggerated accounts made through the Chatham papers, especially the *Planet*, of the sickness existing, that the reports so made were false, and injured very materially the business of the town.

The Inspector was instructed to call on the several medical men and obtain from them a statement of the number of persons sick during the last month, with the nature of the disease, and if recovered.

Strong expression was given to the fact that the Board of Health feel a great drawback to their proceedings by the Town Council not selecting a place for the reception of night soil, and it is felt that the said Council are open to public censure if they do not at next meeting attend to this matter.

Mr. Smith reported that he believed that all kinds of diseases were on the decrease, and the health of the town improving.

The Board have strongly urged upon all parties building water closets in connection with new buildings, and the owners of all water closets within the municipality, the necessity of adopting the dry earth system, as it is the intention of the Board to use their power to the utmost to have this system enforced before long, as the only safeguard against the pollution of wells, which is now known to cause much sickness.

It was ordered that 200 copies of the following notice be posted about the town:—
“All persons are hereby requested to report to the undersigned any nuisance detrimental to the public health, that they may know to exist within this municipality.”

The Board of Health would strongly urge all who wish to see the appearance of the town improved, and also improve the town as to healthfulness, to take down all fences that can be possibly dispensed with, thereby saving the accumulation peculiar to bottom of wooden fences and fence corners, and also to turn up and remove trees, wherever too much shade and consequent dampness to houses and streets are produced. Would also

suggest to housewives (instead of throwing them out) the burning in their stoves peelings and all other surplus matter peculiar to the kitchen; they also suggest that no pigs be kept after this year in the municipality.

Dresden Town.

CHAIRMAN'S REPORT.

Upon their organization the Board deemed it their first duty to make known to the public the principal and leading requirements of *The Public Health Act of 1884*. They therefore had printed and posted in public places in the town large posters setting forth the most important provisions of the Act.

They then directed a careful and systematic inspection to be made by the Sanitary Inspector of all lanes, yards, outbuildings, drains, etc., and a report to be made thereupon as to their sanitary condition, and in a great majority of cases the Board were pleased to find the report very favourable; yards, etc., had been properly cleaned and disinfected, and the occupants had displayed a praiseworthy willingness to assist the Board and their Inspector in their efforts towards sanitary reform.

In some few cases the Board found that it might be necessary to use the powers vested in them by the Act, but before doing so they instructed the Inspector to give due notice to the offending parties, which was done with most gratifying results, subsequent inspection showing that in every case the notices had been complied with.

The Board at all times felt the necessity of making their work as efficient and as inexpensive as possible, and your honourable body are aware that the amount expended has been small indeed.

The Health Inspector now reports that the sanitary condition of the town is good.

Before closing this report might I venture to call the attention of the Council to the following extract from the second annual report of the Provincial Board of Health:—"Throughout our Province, as in most other countries, more deaths are caused yearly by the want of systems for securing thorough cleanliness of streets, lanes, and premises, good ventilation, effective drainage, good water supply, etc., than have ever been superadded to the ordinary mortality by any epidemic of cholera that has occurred." It has been estimated that in this Province of Ontario alone 2,807 lives are annually lost through lack of proper sanitary precautions. It is unnecessary and probably would be out of place to urge the desirability from every moral, financial, and human standpoint, of remedying this state of things as far as in us lies. No doubt a very large proportion of these deaths occur in the large towns and cities, and our own town is comparatively free, but although our duties are light it does not become us, nor is it wise, to be negligent. Careful selection should be made of citizens to form the Local Board of Health; men should be chosen who are likely to be intelligent, conscientious, and persevering in the performance of the all-important duties they undertake; a neglect of which may affect not merely the welfare and health, but possibly the lives, of a number of their fellow citizens; and the citizens should remember that without their cheerful co-operation the usefulness of the Board will be very seriously curtailed.

J. W. SHARPE,
Chairman.

SANITARY INSPECTOR'S REPORT.

The undersigned Sanitary Inspector for the Town of Dresden begs to submit his annual report as follows:

A careful inspection has been made from time to time of all privies, yards, wells, lanes, etc., as required.

In most cases I found the premises clean and in a good sanitary condition—wells, yards, and privies properly clean and disinfected.

In a few cases I have had occasion to notify, and did notify, the occupants to have premises, etc., cleaned, and upon subsequent inspection I found that the notices had been complied with.

The general sanitary condition of the town at the present time is good.

NOAH WAFFLE,
Inspector.

WATERLOO.

Town of Galt.

SECRETARY'S REPORT.

In submitting to you the First Annual Report of this Board it is a matter of congratulation that so much work has been accomplished in the short time that your Board has been organized—viz., since the 10th of June last. At that meeting a Sanitary Inspector was appointed, Mr. James McFeggan, Chief Constable, also a Medical Health Officer, Dr. Brown. But it was not until the 23rd July, when it was found necessary to appoint an Assistant Inspector, Mr. Thos. Patterson, that any regular system was adopted. Mr. Patterson was then instructed by your Board to make a house to house visitation, and I think that your Board has been well satisfied in the way Mr. Patterson has done his work. Your Board ordered several barrels of copperas, which were sold to the inhabitants at a low rate, was freely used, and found very beneficial. During the first inspection of the town by the Ass't Sanitary Inspector he found a good part of it in a very bad state, especially in the central part of the town. After several inspections a decided improvement was noticed, not only by your Board, but by the inhabitants generally. After a few visits by the Inspector he found the ratepayers willing to carry out the orders given by him according to the requirements of *The Health Act*. In a great many parts of the town the Inspector found the water in many of the wells in a very impure state, especially in the town levels, some of them being so bad that they were ordered by your Board to be closed up, which was done. At the termination of the Inspector's duties he reported the town in a very satisfactory state of cleanliness. At the last meeting of the Council a report was presented from your Board urging upon them the necessity of passing a by-law for the introduction of the earth or ash closet system, and in connection therewith a thorough system of cleansing under the authority of the municipality. By this means the town will be in a much healthier state, and the water supply of a much more wholesome nature.

Should the Council acquiesce in passing the by-law, the duties of the Sanitary Inspector will be greatly relieved.

JOHN G. DYKES,
Secretary.

MEDICAL HEALTH OFFICER'S REPORT.

It is matter for congratulation that the Municipality of Galt, acting upon the recommendation of the Provincial Board of Health, has this year established a Local Board to look after the sanitary interests of our town. Although the summer was well advanced before the formation of the Board, yet, organization being accomplished, a vigorous policy was at once inaugurated.

The prevalence of cholera this year in Europe, with the possibility of its crossing the ocean and attacking our country, and even our town, as it did fifty years ago, added stimulus to the efforts of the Board. In the short space of time at their command much has been done in the way of sanitary reform.

The appointment of an Assistant Sanitary Inspector, arising as it did from the suggestion of the Inspector himself, was certainly a move in the right direction, and has

enabled a thorough inspection of the town to be accomplished, resulting, as might be expected, in the discovery and removal of many nuisances. Although a good deal of illness has prevailed during the last few months, yet it has not been so generally extended as in several former years; and this is no doubt partly owing to the salutary efforts displayed by the Board of Health.

Of the usual zymotic diseases, I may say that Measles, although it prevailed somewhat in the early part of the year, was generally light, uniformly resulting in recovery. Of scarlet fever, very few cases have occurred. These were chiefly of an isolated character, while none of them terminated fatally. With Diphtheria the result has been less fortunate, the cases somewhat more numerous, and although recovery was the rule, yet several patients succumbed, death following a brief and almost hopeless struggle. The first mentioned of these diseases seemed to be epidemic, but was of such a mild nature that very little medical treatment was sought for or required. The other two, being recognized by the people generally as being more formidable in their nature, were at once placed under medical treatment when they became apparent; and although their origin appeared to be *de novo*, and could not be traced, yet by carrying out the principles of isolation and disinfection the physicians usually succeeded in stamping out the diseases themselves and effectually preventing their propagation among the people.

In Galt, as in most other large towns, Typhoid Fever is generally endemic in the fall of the year. This season we have had a good many cases, though not nearly so large a number as was generally supposed, and within the limits of our town I believe only one case has proved fatal. The origin in nearly all the cases could be traced to impure water, defective drainage, or pernicious water closet arrangements; and as these are matters directly within the bounds of municipal legislation, I would earnestly recommend the Board of Health to press upon the Town Council the advisability of giving them their mature consideration.

I believe it is the intention of the Board to present an ash or earth closet scheme to the Municipal Council for their approval. I can only say that it is worthy of their highest approbation, and if properly established would be of very material benefit to the health and comfort of the community.

When we remember that Asiatic Cholera has prevailed with such terrible fatality in Italy and some parts of France during the recent summer and autumn, and that now again it is raging with all its virulence in the heart of Paris, as well as in other towns of France, it is manifest that the municipal government cannot be too careful of the health and interests of our people, for it is impossible to foreshadow what another summer may bring forth.

J. P. BROWN, M.D.,
Medical Health Officer.

VICTORIA COUNTY.

Lindsay.

SUMMARY OF REPORT OF LOCAL BOARD.

In compliance with recent legislation, the Sanitary Committee of the Council was dissolved and replaced by a "Local Board of Health," appointed by the Council, which body adopted the by-law referred to in article 69 of the recent Act, in addition to existing by-laws.

The Board has since its appointment in May, 1884, without in any way using unnecessary coercive measures, effected a marked improvement in the sanitary condition of the town. Directing particular attention to a general cleaning up; from house to house inspection of premises; the removal of and giving outlet to stagnant water, where practicable and within the means of a heavily taxed municipality; the regular and periodical removal of offensive accumulations, and deposit of the same in a place set apart for this purpose.

A Sanitary Inspector has been appointed to act under the orders of the Board of Health. He is not a medical man, but being a gentleman of good education and determination of character, has given satisfaction to the Board, and, so far as known, has performed his uninviting and at times disagreeable duties to the satisfaction of the public generally. The salary of this officer was fixed prior to the appointment of the Board of Health, but has not yet been altered to meet with the increased volume of his duties and responsibilities.

Excreta are generally taken away at night and deposited in a place set apart for its reception, but rendered as inoffensive as possible by being covered with earth.

The town of Lindsay, like other comparatively new towns, neglected the necessary precautions on determining and placing on record a regular plan for the level of streets and cellars. In many cases people when building were governed more by expediency and utilization of space than the subsequent sanitary condition of the town.

Privy pits were dug and wells sunk without due caution in regard to proximity. This evil is now being rapidly removed and will in a short time, under sanitary supervision, disappear.

No disease has been reported as attributable to this state of things. Water for drinking purposes is usually carried from wells better situated and unpolluted by deleterious matter. Wells are now periodically cleaned.

Early in the summer of this year, in some cases before the appointment of the Board of Health, and before the receipt of the explanatory instructions from the Provincial Board, a virulent type of Diphtheria made its appearance in the family of Mr. Sanderson. This gentleman occupied part of a large wooden tenement house centrally situated in the town. The first of his family attacked was a boy then suffering from a pistol shot wound in the neck. The sister of the child, who had been visiting at Peterborough, where Diphtheria was reported prevalent, nursed the wounded child, and soon after her return the disease appeared and in a few days three of the children died. On close inspection the Inspector found a cistern on the premises in a very offensive and filthy condition.

The Sanitary Inspector personally superintended the disinfection of the houses, using chloride of lime, carbolic acid, etc.

No system of isolation beyond putting up the notices, and prevention of children attending school was adopted.

Children were kept at home until permitted to attend school under permission given by medical attendants.

J. DEACON, Chairman.

JAMES W. KNOWLSON, Secretary.

MIDDLESEX.

London East.

CHAIRMAN'S REPORT.

I beg to submit to you the first report of the London East Board of Health, accompanying a report of the Medical Health Officer, which contains some important suggestions for the future health of our town.

Our Board consists of nine members, two of whom are medical gentlemen; one of them, Dr. Gardiner, has been appointed Medical Health Officer, without salary. We have also appointed the town constable Health Inspector without salary, who has visited a large number of the yards and wells. He reports a number of the wells as being in a very bad state, and has taken the water of the same to the Medical Health Officer for examination, who reports, after giving the water a thorough test, some totally unfit for use.

The sanitary measures for the benefit of the public health have not been so systematically carried out as they should have been, owing, in a great measure, to not being conversant with the Act made and provided.

The memorandum book for the Health Inspector has not been used this year, owing to his not being a paid officer; believing the finances of the town would not permit of the Board making a demand this year, they have tried to work without expense.

There has been more Typhoid and Malarial Fever this summer than last, and the Board would strongly recommend that a by-law be passed to provide for a better system of water-closets and the cleaning of the same; also, that the creek known as English Creek, should be cleaned out at least once a year, to give a free course for the drainage leading into it to pass away freely, as the neglect of cleaning causes the creek to overflow at certain seasons of the year and the overflow of water runs into the wells, carrying with it all kinds of filth, causing much fever.

The Board hopes to have next year a paid Health Inspector, who will make a thorough inspection, reporting all cases of note to the Board.

The Board also hopes that when London East has water works, either of their own or from the city of London, that a large number will avail themselves of pure water, as many now are drinking and using very impure water, causing a great deal of sickness.

Also the matter of draining must very soon have your special attention.

All of which is respectfully submitted.

CHARLES TILLEY,
Chairman.

MEDICAL HEALTH OFFICER'S REPORT.

I am sorry that this, the first Report of the London East Board of Health, is very incomplete. The reasons are these: First, your Health Officer has given me no data from which to frame your report. Second, the short time our Board has been in existence; and lastly, because my time has been occupied so much that I have been unable to collect the material for the report. With the foregoing explanation, and hoping that future reports may be more satisfactory, I submit the following to you:

The Town of London East is so situated that it ought to be one of the healthiest in the Province. The porous nature of the soil, the excellent facilities for drainage, and the inland and elevated position which it occupies, are factors in which nature has been lavish for our aid. I am happy to state that our death rate will compare favourably with that of any other town of the same size in the west.

But although I state these facts I have also to add that there is a good deal of sickness in our midst which might be avoided. Apart from the nature of the season, which has been one favourable to the development of Typhoid Fever, Diphtheria and kindred diseases, there have been too many cases of fever to trace them merely to accidental causes. Two well marked centres have existed for some time, and from these the disease has radiated to a considerable distance, but happily has not become at all general. I refer to the asylum creek, which drains the piggery and slaughter-house. Steps have been taken to check this nuisance, which I hope will prove to be successful; and a well on Van-street, the water of which has been very impure. I have also observed that quite a number of cases are found where the soil is low and damp. These are the chief apparent causes of disease, but others exist which at any time may prove to be much more serious causes of sickness. I will name a few of them, with the hope that when your next annual report is submitted they will not exist. The first and most serious are the cesspits which exist on almost every lot; the general habit is to dig one of these and use it as long as possible, cover it up when nearly full and dig another. As a result of this our soil will soon become so permeated with animal matter that the wells will be impure, and if Cholera or other allied disease visit us the result will be disastrous. A by-law is being prepared to remedy this evil in part. It will be your duty, gentlemen, to see that its provisions are carried out. The wells are another source of danger to us. In many parts of the town the water is good but in others it is not first-class, and in all many wells contain water unfit for use, either on account of their proximity to the water-closets or on account of not being cleaned. The wells as well as the closets ought to be inspected in a systematic manner by a person

competent to judge of their purity. Still another source of disease is the manner of construction of many of our houses ; the foundation is of wood, they are built close to the ground and banked up early in the fall, and the earth is not removed in the spring ; as a result, mould and dampness exist beneath the house, and the health of the inhabitants suffers. The foundations should either be stone or brick, and these should be ventilated, but if wood is used a free current of air should pass beneath the house during all seasons but winter.

The last source of disease to which I would refer is the dampness of parts of the town, especially the northern and north-eastern portions ; the remedy for this is in deepening English Creek. I am happy to state that this has been commenced, but only partially completed, the cause for the delay being the lack of funds. I hope, gentlemen, you will consider it your duty another year to see to the completion of it.

These, gentlemen, are some of the causes of sickness in our midst, the most of them are easily remedied. It is your duty to see that they disappear, so that if plague or pest visit our town there will be no open door to invite its stay. Do not lock the door when the steed is stolen, but be prepared for the worst and hope for the best.

J. H. GARDINER,
Medical Health Inspector.

GREY.

Town of Meaford.

SECRETARY'S REPORT.

The Board of Health held its first meeting on the 9th June, 1884, when notices were ordered to be served on three different parties to remove nuisances reported by the Chief Constable to exist on their respective properties.

It was resolved to request the Town Council to appoint a Sanitary Inspector.

A second meeting was held on the 28th day of June, 1884, when notices were ordered to be served on thirteen different parties as to nuisances reported by the Sanitary Inspector to exist on their respective properties, requiring them to remove such nuisances.

A third meeting was held on the 21st July, 1884, when it was ordered that certain tenants should be charged with the expense of removing certain nuisances where the owners had failed to do so, and such tenants were directed to deduct the amount from rents due by them.

A fourth meeting was held on the 21st day of August, 1884. Questions from the Provincial Board of Health were submitted and answered, and the Sanitary Inspector was directed to have a drain made from the fish-houses so as to abate the nuisance existing there—which drain was made.

A fifth meeting was held on the 24th September, 1884. The Sanitary Inspector reported that a nuisance existed on a certain lot in the town, and the Secretary and Inspector were instructed to have the necessary notices served on the parties concerned, requiring the removal of the nuisance.

A sixth meeting was held on the 27th October, 1884, when the Sanitary Inspector was directed to have the nuisance, reported at the last meeting, removed at once, as neither the owner nor the occupier, although duly notified to do so, had removed the nuisance.

The Board is satisfied in being able to report that in every case brought before them the nuisance complained of has been removed or sufficiently abated.

The general sanitary condition of the town is tolerably good, and the Board confidently hope that in future every inhabitant of the town will attend to the sanitary condition of their premises and thus render the work of the Board less onerous than it has hitherto been.

The Board has not, as yet, appointed a Medical Health Officer, and as there have been but few, if any, cases of contagious or infectious diseases in the town during the year, it is not thought necessary to make the appointment. It is hoped that a strict attention by the Sanitary Inspector to the duties of his office will render such appointment unnecessary.

JOHN ALBERY,
Secretary.

WELLINGTON COUNTY.

Mount Forest Town.

SECRETARY'S REPORT.

There is a Local Board of Health in Mount Forest and it has a Sanitary Inspector, but no Medical Health Officer. The Council has set apart the sum of \$25 for the use of the Board. The Inspector made a tour of the town and had all yards and premises cleaned up, but did not keep a detailed report of the amount of sanitary work performed. The town is in a fair sanitary state. In case of an epidemic of disease visiting us we have no isolation hospital, and if such is not erected would have to depend on the ordinary methods employed in such cases.

W. C. PERRY,
Secretary.

LENNOX AND ADDINGTON.

Napanee.

SECRETARY'S REPORT.

It is a source of congratulation on being able to report, that during the past year, and more especially since the appointment of the Board under the new Act, that the absence of infectious diseases and the comparative healthy condition of the municipality, there had not been a very great necessity for any active measures or special attention of the Board, further than the appointment of a Sanitary Inspector, until about the first of October Scarlet Fever broke out in the town which has prevailed to the present, 100 cases having been reported by medical practitioners, nearly all now being convalescent, and eight cases which were fatal. The epidemic appears now to be quite abated, as there is but one or two isolated cases reported. The Sanitary Officer under the supervision of the Board, during the early part of the season made a thorough inspection and examination of all streets, lanes and premises where offensive or dangerous accumulations, prejudicial to the general health of the inhabitants might exist, and caused the same to be removed, and the town placed in a thorough healthy condition.

In view of the fact of rumours of the existence of Small Pox in an adjoining county, the attention of the Board has been called to the necessity of taking prompt and active measures to prevent an outbreak of the epidemic in the town, and of procuring an isolated building to be used as an hospital, if required, in case of any dangerously infectious diseases breaking out in the municipality.

I am unable herewith to include the report of the Chairman of the Board as provided by Statute, as he has neglected to submit it.

P. EMBURY,
Secretary.

LINCOLN.

Town of Niagara.

SECRETARY'S REPORT.

I have to report that Scarlet Fever, Diphtheria and Typhoid have been in a few families, but did not spread to any alarming extent. Nuisances, such as privies, unsanitary slaughter houses, etc., have received the necessary attention, and some were dealt with in a forcible manner in accordance with the Act. The town is now in a comparatively good sanitary condition.

DAN SERVOS,
Secretary.

WELLAND.

Town of Niagara Falls.

SECRETARY'S REPORT.

On July 21st, the services of Sanitary Inspector Coulson were dispensed with, and William Hoey appointed in his place, and in default of William Hoey accepting the office, L. D. Groom was appointed Sanitary Inspector by the Chairman, and served as such during the warm weather, and was paid \$35 for his services by the Town Council on the recommendation of the Board of Health.

The Board encouraged the use of disinfectants by furnishing copperas at cost price to citizens.

No Medical Health Officer has been appointed by the Board.

Whatever expenses the Board incurred were paid by the Town Council on the recommendation of Board.

The sanitary condition of municipality is good, and has been during 1884.

J. ROBINSON,
Secretary.

BRANT.

Paris Town.

CHAIRMAN AND SECRETARY'S REPORT.

We beg to report that the Board has held regular sessions when occasion required, and report that a thorough supervision of the whole town has been exercised, which the Sanitary Inspector's report herewith certified will show.

No difficulty has been put in the way of the action of the Board, and a ready response has been made, even when the matter complained of required the outlay of money to remedy.

The town has been comparatively free from Typhoid Fever and epidemics; a few cases of Scarlet Fever brought from Brantford were carefully looked after, and their spread stayed.

The well on Grand River Street has been ordered to be closed, many complaints having been made as to the water.

The Board recommended the payment of ten dollars to the Secretary, and the same sum to the Sanitary Inspector for services rendered.

CHARLES WHITLAW, Chairman.
S. DODSON, Secretary.

 SANITARY INSPECTOR'S REPORT.

I made a formal inspection of every house in town during the month of May, and found the condition of the premises good, excepting the privies of twenty-one, which, as a rule, were full; left orders at the time for these to be cleaned or disinfected, as each case required.

On my second visit to see if my orders were carried out, I found that they had been, that either disinfectants had been sufficiently used or the privies covered up and new ones dug. Since I received more definite instructions from the Board, my orders are to clean out all privies before they are filled up; after this I went through the town to ascertain the number of pig-pens, and found that there were seventy-two in use. Complaints had been made against two of them, and an order for their removal was promptly complied with; all the other pens were kept in accordance with the by-law. Complaints were also made to me of a butcher's slaughter house, contrary to the by-law; this, too, was promptly attended to. Complaints have now and again been made about the refuse from the premises on the east side of Grand River-street being emptied into the river, and that during low water it accumulates and an unwholesome smell prevails. This has been partially remedied by digging an open drain in the rear of the buildings, and allowing a good stream of water to run through it. This can never be satisfactorily remedied until ash closets are constructed in the rear, and the contents carried away, thereby preventing the pollution of the river and the noxious odors.

I beg here to state that several of our townspeople have introduced the ash closet.

A complaint arising from a hen coop on Broadway-street was promptly remedied.

Complaints have frequently been made in reference to a stagnant pool in the south-east corner of what is known as the flats; it has been a resort of ducks and geese. The people of the neighbourhood have looked upon it as an unhealthy spot, and the source of foul emanations. The mayor promised to have it removed, and this source of complaint is expected soon to be a thing of the past. A stagnant pool near the station is occupying the attention of the Board, regarding how best to remove it altogether.

One or two lots which are flooded by a spring rendering them damp and boggy, I have advised to be attended to.

There are two dams in the town, one of which I believe no exception can be taken to, as it is occasionally pretty well emptied, and but little stagnant water exists at any time. The other one on Smith's creek is surrounded by considerable marshy ground, which is thought to have an evil influence.

The race on Smith's creek and the Grand River have at times been noticed to be much colored with dyes from the factories, to which the attention of the fishery inspector should be drawn.

The drainage during the last year of a piece of ground known as the Cricket Park, on the outskirts of the town has, no doubt, had its influence for good; previous to draining there was a large marsh. When the drain was fresh dug, the workmen complained of a very strong smell.

The water works which are now being connected with many houses, supplying the purest spring water, is a manifold blessing to a large number of people.

GEORGE PIERCE,
Sanitary Inspector.

Peterboro'.

SECRETARY'S REPORT.

As required by *The Public Health Act, 1884*, I hereby submit the First Annual Report of the Peterboro' Board of Health, and while regretting that much sanitary work yet remains to be done, I think the Board may congratulate itself upon accomplishing

many things which will have a tendency to render the work less laborious in the years to come.

The Board was duly organized in May last, as required by law, Mr. Andrew McNeil being elected Chairman. The Town Council, upon receipt of the first report of the Board, appointed the following salaried officers:—Dr. John Clarke, Medical Health Officer; P. C. R. Pidgeon and P. C. R. H. Adams, Sanitary Inspectors; James G. Macdonald, Secretary.

Since its organization the Board has held seven formal meetings, besides numerous informal gatherings or conferences whenever anything special was brought to their attention.

We have had considerable difficulty in getting persons to make complaints and substantiate them, as we find out that people will stand even a great nuisance for a considerable length of time, rather than inform on their neighbours.

Another matter I may here mention is the fact of members not attending the meetings regularly. At first no difficulty was experienced in getting full meetings, but as the novelty wore off the members began to pay less attention, until on the two last occasions enough members to form a quorum were with difficulty “drummed up.”

On the whole, I think I can say that the Act has been fairly carried out in this municipality. Our inspectors who are also police officers, building inspectors, etc., have not, perhaps, paid as much attention to their business as they might have, but press of business is the excuse to be urged. The suggestion has been made that next year one man be appointed whose sole business shall be that of Sanitary Inspector, and in all probability such will be done.

I have no doubt that some amendments to the Act will be made at the next Session of the Legislature, and I have drawn the attention of our member, Mr. John Carnegie, to several clauses which I think need amendment.

Some of the physicians have made reports of all the infectious diseases encountered by them, while others have not paid the slightest attention to the circulars and blanks furnished by me to each practitioner in town. I make this statement from a full knowledge of the facts, gained from a perusal of the death returns as registered in the office of the Town Clerk. The delinquents were each spoken to and promised to make the necessary reports in future. A fact that my attention has been drawn to, on more than one occasion, is that the higher a patient stands socially or the better he or she is endowed with this world's goods, the less likelihood there is of the attending physician ordering the house to be placarded, by sending in the necessary form.

Several very important matters, such as the filling in of Spaulding's Bay, sawdust in the river and lake, a system of sewerage, etc., have come before the Board during the year, but in no case has an entirely satisfactory solution of the difficulty been arrived at. Dr. Bryce personally inspected Spaulding's Bay and can speak as to the great cost and difficulty of filling up what is a veritable pest hole and hot bed of malaria. The cost of abating this nuisance has been estimated at from \$20,000 to \$30,000 by a competent engineer, figures that place the matter away beyond the reach of this Board or the Town Council, as for such a vast outlay, the town would only get a few acres of land in the outskirts.

The quantity of saw-dust in the river and lake is enormous, and the gases arising from the decomposition of it cannot be conducive to health. As I understand, there are other places situated the same as us in this respect, and that the Provincial Board intend to take some action in the matter. I would suggest that this is a matter that calls for the interference of the Government, as it is a matter beyond the control of the authorities of the town and county.

At first the complaints regarding slaughter-houses within the corporation were numerous, but rigorous measures and a close bi-weekly inspection has had such a good effect that all complaints have ceased, and the premises of all the butchers are now kept clean and orderly, and do not give even the slightest offence to those who reside closest to such places.

Our system of sewerage is very defective, but of late much attention has been drawn to the matter by the construction of water-works, and it is expected that during next year something will be done to provide a proper system.

With regard to the water closets at the railway stations, plans of which were sent to

the Provincial Secretary, I have to say that the notices of the Board, regarding the adoption of the dry earth system, were totally ignored by both the Canada Pacific and Grand Trunk Railways and knowing from past experience that the companies, if beaten in the Police Court, would, if necessary carry the case to the Supreme Court, and as the closets at both depots are kept in a clean condition, legal proceedings were not taken.

By a resolution of the Board all the owners and occupants of premises in the centre of the town, within a specified area, were notified by the inspectors to fill up their vault water closets and substitute therefor closets on the dry earth system, but owing to the doubt existing as to the authority of the Board to enforce such an edict, those who failed to comply, embracing nearly all who were notified, were let severely alone.

One thing that militates against the introduction of the dry earth system is the cost of the closets. We have received circulars from a dozen different manufacturers, but the prices of all are "away up," and unless some person will go into the business and manufacture a cheap and good article, we are much afraid that the progress in this respect will not be very rapid.

When the inspectors first started on their rounds they had considerable difficulty in enforcing their instructions, but a number of fines imposed by the Police Magistrate, the cases being fully reported in all of the local papers, had a most salutary effect, and since then they have had no difficulty.

Early in the year the Board secured an excellent nuisance ground, an old sand-pit situated on the outskirts of the town. Trenches were dug ready for the reception of the deposits and the owner of the property is always on the premises ready to help to cover up anything that may be drawn there. It has worked well and all have shown a disposition to obey the law.

In conclusion I would refer you to the Medical Health Officer's report which follows, in which a detailed statement of the work done during the year is given.

A. McNEIL,

Chairman, B. H.

JAMES G. MACDONALD,

Secretary, Board of Health.

MEDICAL HEALTH OFFICER'S REPORT.

In presenting to you the Medical Health Officer's first annual report, a word or two may be said in reference to the purposes of these institutions which an Act of Parliament has rendered necessary in the municipalities of the Province.

The first, and I believe the greatest, object is to call attention to the vast importance of sanitary work, more particularly in crowded towns, in limiting the progress of disease, in removing these unhealthy conditions which are a standing invitation to outside epidemics, in not only giving the prospect of longer life to our citizens, but ensuring that they shall be healthier and happier and more fit to cope with the struggles of existence. Coupled with this is popular education in the means by which this perfect sanitary condition may be brought about. The second object is the enforcement by law of sanitary precautions and necessities where occasion demands it.

"An ounce of prevention is worth a pound of cure," should be the motto of every Board of Health. When sickness comes it is too late to act. The blow has been struck, and we can as soon expect to give life to a murdered man by punishing the assassin, as to cure the disease by putting an end to its cause. It is unquestionable that a large proportion of diseases is due to conditions arising from ignorance of the laws of life or carelessness of their effects. Consequently by proper attention to these conditions many diseases may be prevented, or, at the least, greatly ameliorated. As an instance of the value of sanitary work in lessening the tables of mortality we may take the ratio of deaths to population during the six years before the passage of the *English Health Act of 1875* and the six years after that date. We find that during the first mentioned period the death rate was 22.09 per 1,000, and during the last mentioned 20.63 per 1,000, the total saving thus effected in six years amounting to 119,118 lives. A septic

might say that this was all chance. Science believes in no such thing as chance. Science believes that everything happens as the result of an inexorable law, that every atom of dust that blows about the streets is deposited in its place, that every drop of rain is urged to its destination by the resistless force of that law. Precisely the same thing occurs as regards the elements of disease. Not a germ of disease floats through our air but was generated by exact conditions and will reproduce its kind when it lodges in the proper soil, as surely as wheat produces wheat, or an acorn the oak. It is time, therefore, that we should get rid of the idea that disease comes by the visitation of God, that is to say, that it is unpreventable and should be submitted to with the fatalism of a Hindoo. Sometime ago a serious epidemic visited Scotland, and the people asked Lord Palmerston, the then Prime Minister, to appoint a day of humiliation and prayer for the aversion of the plague. He answered that as soon as the people had cleaned up the filth about their streets and dwelling-houses he would have no objection to accede to their request, but that before such measures had been taken, it would only be an insult to the Almighty to ask Him to remove what had been caused by negligence and could be checked by their own exertions. The rule is applicable everywhere. Strict cleanliness is the great precautionary measure. And this cleanliness must be general, thorough and constant. A town which, otherwise a model of sanitary perfection, presents a single nuisance, is similar to a splendidly fenced field of grain with one little gate open. Epidemics are sometimes a blessing in disguise by arousing popular attention to sanitary errors. It would, however, be criminal to wait for epidemics. Let us be constantly alive to our necessities. Eternal vigilance is the price of health as well as of liberty.

During the first few months the Board has been in operation much has been done. Although late in starting, a good commencement has been made. To be sure, we have not done all we could have wished. Our hands have been tied by various causes. Some questions have arisen as to the correct interpretation of the law. Being a new thing, it was natural too that many should object to the stringency of some clauses. But I think I am justified in saying that upon the whole the law has worked well, and that there is a general feeling among the public that even those regulations that are least palatable should be carried out, not, perhaps, with the utmost rigour, but with a temperate firmness which is certain to attain the desired end.

The particular questions that claim the attention of the Board are—

Slaughter-houses.—From a sanitary point of view, when a town reaches the dimensions of Peterborough all slaughter-houses should be removed outside. From the very necessities of the case they must gather about them more or less deleterious matter, even though the utmost caution be exercised. Careful inspection has been made once or twice a week during the season, and the butchers themselves acknowledge the benefit of a stricter attention to cleanliness. I believe they have done their best to meet the views of the Board. Some of the places being old and more saturated with soakage have necessitated the use of large quantities of disinfectants. The very trouble required in keeping them passably clean is an evidence of the difficulties in the way.

Severage.—The necessity for better sewerage was urged in a former report, and need not be referred to, except to emphasize what was then said. I have talked over the matter with most of the medical men here, and they unanimously consider it one of the most pressing needs of the town. Private individuals and large property owners take the same view.

Closely connected with this is the question of the disposal of excreta, and earth closets. At a former meeting of this Board a resolution was passed insisting upon the substitution of dry earth closets for privy vaults in the central parts of the town. Although a good deal of interest has been awakened by the subject, few have complied with the resolution. The season is late, and we are not sure yet that the most convenient and economical form of dry earth closet has been put in the market. I stated before that a good kind was being manufactured in town. Further improvements have been made in it to meet more extensive requirements. A stock company has also commenced the manufacture in Toronto of an earth closet largely used in England, and known as Heap's earth closet. Others are at work, and next season we bid fair to have the subject forced upon us by the solicitations of sellers, as well as by the decrees of the Board. An

important point is the supply of dry earth, for it is precisely where it is most needed that it is hardest to be procured. We have urged the matter upon the attention of gardeners and others. A lucrative business might be done in supplying dry earth for closets and removing excreta for purposes of fertilization. When we consider that from a town of 8,500 or 9,000 inhabitants, upwards of 200 tons of solid excreta might annually be obtained under a good system, we may judge of the fertilizing power that is lost. With the dry earth system all this might be removed in broad daylight without the slightest offence. When these facts are known more generally there will be no obstruction to the working of the dry earth system.

Removal of Garbage.—This is another important question. Scavenger carts ought to be more common in our town. Hotels and private families have a large amount of table and kitchen refuse difficult to dispose of. Pigs are prohibited, and in consequence everything is thrown into the back yards, or too often into the privy. In the investigation of nuisances we have found this to be a common cause of complaint among neighbours.

Wells.—Since last report I have analyzed the water from several more wells, and found considerable organic matter in most of them. The purity of water can not always be judged of by its appearance. As stated in the first annual report of the Provincial Board of Health, "well water may be bright, cool and sparkling, and yet highly dangerous, from the presence of the products of decomposing nitrogenous matter, and frequently from the presence of specific germs that may have filtered from neighbouring privies. Under the microscope water containing sewage discloses the presence of *bacteria* and *infusoria*, the frequent causes of bowel complaints, typhoid and other diseases. The notion that by filtering through the earth water is rendered pure is an erroneous one." Considering the vast amount of excreta with which the earth is saturated it is a wonder that diseases from impurities of water are not more common. At the same time we are always running a risk, the only remedy for which is to obtain our drinking water from a pure source, outside of the town.

Infectious Diseases.—It is a matter for congratulation that no serious epidemic has visited the town this season. The most noticeable feature under this head has been the occurrence of a number of cases of typhoid fever, a fact of melancholy interest to the Board of Health, as thereby we lost one of our most faithful members. Fortunately this disease, owing to the more rational treatment of the present day, has a favourable termination in the majority of cases, but its presence in any form is an indication of sanitary error. The reported cases have been subject to strict investigation, and are believed to be due not so much to general causes as to some local neglect. Typhoid Fever is one of those diseases which ought to be completely prevented by the adoption of enlightened principles.

A few cases of Scarlet Fever and Diphtheria have also occurred. When reported, complete seclusion has been insisted upon. Disinfectants, and the various other means of limiting the diseases, have been used. Reported cases have also been placarded.

Respecting the reports of medical men in infectious diseases, this part of the Act has not been as satisfactorily carried out as I could wish. Some of the leading practitioners have sent in reports faithfully, and have been active in giving assistance in furthering the regulations of the statute, but quite a number of cases are not heard of except by accident. These oversights will become less frequent as the advantages of the law are more fully recognized.

A few other matters claim our notice. The Spaulding's Bay question has been discussed, *ad nauseam*. No medical expert is needed to prove it a nuisance of the first order. It is sincerely to be hoped that some means will be found by which this town nuisance may be abolished, and thereby an example set to minor offenders.

The closing or reconstruction of the Hunter-street drain seems to have been relegated to the limbo of too expensive luxuries. In the exact centre of the town, it smells to heaven, as if a Presidential candidate was buried there. In default of more thorough work a great change might be made by simply cleaning out the shaft and putting a few pounds of disinfectant at the bottom.

The condition of the streets demands our notice also. I think they should be scraped oftener, particularly in the latter part of summer and fall. There is too much mud. Let

us think for a moment of the composition of this mud. The sweepings of the stores, scraps of fruit, manure, dirt of all kinds, festering together in an unsavory mass. When dry weather and high winds come all this is blown in the form of dust about the streets, to be inhaled by everybody, the prolific cause of Catarrhs, Bronchitis, Fevers, Diarrhœa, and it is hard to say what else.

The sawdust nuisance is another point of importance, but being of general interest is dealt with more fully in the answer to a series of questions issued by the Provincial Board. What we should think of is the fact that half a dozen mills are discharging constantly into the river an amount of sawdust equal to about ten per cent. of the output of lumber, that a large portion of this is carried into the Little Lake, that there it is mixed with sewage and other refuse from the town and surrounding shores, and that thus there is danger of the lake being converted ultimately, in part or in whole, from a beautiful sheet of water, admirably adapted for purposes of recreation, into a vast malarious marsh in comparison with which Spaulding's Bay would seem a rose-bed. Certainly this subject should receive the most careful consideration, and comprehensive measures be taken with as little delay as possible.

In compliance with a request from the Secretary of the Provincial Board of Health, monthly reports of disease, instead of weekly, as formerly, have been sent up. These, I believe, will give as fair an idea as possible of the ratio and prevalence of disease in the municipality.

I may say here that I have received scores of complaints as to nuisances of all kinds, alleged or real, from private individuals who did not wish their names mentioned or the matter brought before the Board. With the assistance of the Inspectors, I have endeavoured to have these affairs rectified as satisfactorily as possible. But it should be remembered by the public that the laws of the Board of Health are similar to any other laws, and that complete satisfaction can only be obtained by open and undisguised complaint.

To conclude, as I stated in the beginning, education is of paramount importance. How should this be obtained? The time is coming when we shall have it taught in our schools, but that is not yet. Our newspapers do noble work in giving the public selections from the best medical and sanitary publications. The Provincial Board of Health distributes pamphlets as far as its means allow, but those means are limited. To help along the good work I propose next spring and summer to write a series of letters to the papers on various sanitary subjects, giving practical hints as to those questions which lie nearest us and concern every individual. It is my desire, and I am sure it is the desire of every member of this Board, that the town of Peterborough, so conspicuous among other towns by its beauty and situation, by the enterprise and prosperity of its citizens, may be noted still more for that perfection of sanitary arrangement, without which all natural gifts and all acquired advantages would be in vain.

Respectfully submitted,

J. CLARKE, M.D.,
Medical Health Officer.

Synopsis of sanitary work done in the Town of Peterborough from 1st June to 15th November, 1884:—

Number of yards examined	456
Number of water closets	387
Number of yards found in good condition	95
Number of yards cleaned	342
Number of manure heaps, hog pens, etc., removed	130
Number of notices served, dirty yards and closets	183
Number of notices served, garbage and refuse	53
Number of notices served to put in earth closets	16
Number of old wells closed	4
Number of analyses of well water	17

Reports of disease :—

Smallpox	0
Scarlet fever.....	8
Diphtheria	7
Typhoid fever	12
Houses placarded.....	5

LAMBTON.

Petrolia Town.

CHAIRMAN AND SECRETARY'S REPORT.

The Board beg to report as follows :—

That the Board was organized on the 19th day of May last, under the Act of 1884, and that John Fraser, Esq., was appointed Chairman of the Board.

The Chairman was authorized to instruct the Sanitary Inspector, David Deacon, appointed by the Council, to proceed and make a thorough examination of the town, and that he should report daily to the Chairman the progress made.

That the Inspector entered upon his duty with zeal and firmness; and reported to the Chairman that the people, as a rule, obeyed his orders, and the town was soon put in good sanitary condition as far as circumstances would permit.

The Board procured a supply of blank forms for the use of medical men, to report on any outbreak of infectious disease in the town; that to the present time they have not had a single case reported to them, and believe the town to be at present in a good sanitary condition.

The Board are of the opinion that the public sewers of the town are good of their kind, and are being improved by inserting gas traps; they regret there is not a sufficient supply of water to flush the sewers.

The present system of privy vaults or pits received the attention of the Board, but the nuisance could not be remedied this season. The town being a new one, the Board felt that rules and systems applicable to older places could not at present be enforced here, but that important matter will likely receive attention early during the ensuing year.

JOHN FRASER, Chairman.

GEO. S. McPHERSON, Secretary.

ALGOMA.

Port Arthur.

MEDICAL HEALTH OFFICER'S REPORT.

The attention of the Local Board of Health was directed on its formation to the location of ground for the depositing of refuse, etc., the clearing of all ditches, cesspools, and other malarial spots, and a system of removal of garbage and refuse. The Board appointed a Medical Health Officer in the person of Dr. Jackson, and a Sanitary Inspector. The contents of privies requiring removal are carted away during the night and deposited in the "nuisance ground," and covered with a layer of earth. The inhabitants are looking forward to the introduction of the dry earth closet system, which is being vigorously agitated at present. The cleaning of wells has received attention, and where they are too closely situated to back premises, are closed. The principal source of water supply, however, at present, is a creek from which, at a point 1,200 feet up stream from the town, the water is taken. There have been thirty cases of Typhoid Fever during the year, and the drinking of impure water from forbidden sources we believe to be the cause. A

temporary hospital has been erected where those suffering from contagious diseases are sent to, and the houses wherein they contracted the disease well fumigated, etc. The Medical Officer visits the school once a week ; and the Board have issued sanitary instructions under the Act, which, if attended to, will have the effect of reducing the sickness of the town.

H. P. JACKSON, M.D., Medical Health Officer.
A. W. LANGWORTHY, Secretary.

LEEDS AND GRENVILLE.

Prescott Town.

MEDICAL HEALTH OFFICER'S REPORT.

I have the honour, in reply to your circular of October 21st, of presenting the First Annual Report of the Local Board of Health of Prescott. Our Board, though only organized some months, and consequently in a somewhat primitive state, still has done some work in the right direction, and promises to, at least, partially fulfil the objects in view.

G. B. HART, M.D.

LAMBTON.

Town of Sarnia.

SECRETARY'S REPORT.

There is a Local Board of Health in this town, and the health of the inhabitants has engaged its attention since organization. There is a Medical Health Officer, but no Sanitary Inspector appointed. All complaints *re* unsanitary condition of privies, etc., have met with prompt attention from the Board and its Health Officer.

We have had three cases of Typhoid, three of Diphtheria, and three of Scarlet Fever, and all the powers given by the Act regarding isolation, etc., have been enforced. The Board strongly believes that "prevention is better than cure," and will do all it can to that end, and what is required generally by the Act of 1884.

E. H. JOHNSTON,
Secretary.

HURON COUNTY.

Seaforth.

SANITARY INSPECTOR'S REPORT.

I made a general inspection in June last of premises in this municipality, and beg to report as follows :

I found in many of the back yards manure heaps and other decaying matter which I instructed owners to remove, which they have generally done.

The privies were in a very unsanitary condition, and nothing could be done with them during the hot weather further than to have them regularly disinfected, which was generally done. I would recommend that the water closets be cleaned sometime during the winter season and the soil removed from town to some isolated place or farm, where it may be used as manure.

I found that there were ninety-three pig sties, varying from twenty to seventy feet from any dwelling house, some of which, nearest to dwellings, have been removed, and more will be disposed of as soon as owners can do so without loss.

E. LUSBY,
Sanitary Inspector.

CHAIRMAN AND MEDICAL HEALTH OFFICER'S REPORT.

The Council of Seaforth.

GENTLEMEN,—I am happy to congratulate you on the formation of a Local Board of Health under the co-operation and with the desire of the Provincial Board.

I have no doubt but you will agree with me when I state that there is already a marked sanitary improvement in the town. But you must remember, while we exchange congratulations in respect to our present healthy condition, we must bear in mind that we have been blessed with a summer that was remarkable for its coolness and salubrity. This notable feature being the case, it should stimulate us more and more to push forward the good work already progressing.

You will notice in reading the Secretary's report that the Board asks your assistance in the appointment of a scavenger for the town, whose duty will be guided by the Sanitary Inspector.

The Board also reminds you of its financial standing, and calls upon your kind generosity to appropriate such sum of money as you in your wisdom may see fit, to meet the current expenses of the year.

Hoping that the next annual report will be as favourable.

W. HANOVER, M.D.,
Chairman and Medical Health Officer.

—
LANARK.

Smith's Falls.

CHAIRMAN AND SECRETARY'S REPORT.

On the 4th day of August last the Municipal Council, by by-law, appointed a Local Board of Health, composed of W. H. Frost (Mayor), W. M. Keith (Clerk), and J. M. Clark, Wm. Graham and John Splane, with Dr. McCallum, Medical Health Officer, and Robert Reynolds, Inspector.

After our organization, as Diphtheria was doing its deadly work among the children, we determined upon enforcing a vigorous and thorough cleaning up. This place has always in the past borne a good reputation for cleanliness, but we found that the cesspools particularly, were, in a general way, in bad condition. These are chiefly constructed by excavating a hole in the rock and building up with stone. The Inspector reported against scores of them, and in every case the parties using them had to clean them out, and disinfect, and leave in a satisfactory sanitary condition. Some few refused to do anything, and in these cases the Board put on men and did the work, and made the unwilling parties pay the bill. This work was all done during the night, so that the citizens generally hardly realized what was going on. Every yard was also made scrupulously clean.

Some fears being expressed that our well water might be contaminated, we sent samples from four of the principal wells to Prof. Ellis for analysis. Three samples were pronounced excellent and one unfit to drink. The one condemned we found polluted by surface water getting in, and in it was a plentiful deposit of washings from the street. We caused it to be thoroughly cleaned, and provided—by removing a telegraph pole, which was the chief trouble, and other precautions—against any more surface water getting in.

Some of the butchers, in spite of many warnings, persisted in dumping the offal from their shambles into the river, where it often proved very offensive, especially when the water was drawn off for navigation purposes, and we resolved to have all slaughter-houses removed beyond the corporation. Owners have been notified to have them removed before the 1st of May next.

There has been very little Diphtheria during the last two months, and that only of a very mild character. As soon as a case is reported by the attending Physician the house is strictly quarantined, and supplies taken to the door by the Inspector.

The foregoing is a slight outline of the duties performed by us.

W. H. FROST, Chairman.
WM. M. KEITH, Secretary.

MEDICAL HEALTH OFFICER'S REPORT.

In presenting my annual report for the current year, allow me to compliment the Board on the increased and increasing interest taken in sanitary matters in our town since your appointment a few months ago. To train up this interest until it ripens into a sound, healthy public opinion on local sanitary affairs should be the especial care of the Board. As the time since your appointment has been so short there will probably never again be as many evils to combat, nor so wide a field for suggestions as to the course to be pursued in doing so. Inasmuch as there is a strong probability that this continent will be visited during the coming summer by that most dreadful disease, Asiatic Cholera, it behooves us to put the town in as good a sanitary position as possible, in order to minimize the danger. Should we be so fortunate as to escape this threatened evil, let me here point out that the work of preparing for it will not be thrown away, since all respectable medical authorities are of the opinion that Diphtheria and kindred zymotic diseases, if not caused by filth, mainly flourish where the surroundings are bad. With this object then in view, allow me to throw out the following suggestions:—

1st. That the Board use their influence with the Town Council to carefully amend the Model Sanitary By-Law adopted, so as to make it suitable to the requirements of our town, and having done this, rigidly enforce it. I need not suggest amendments, for they are quite obvious to any careful reader.

2nd. Too much care cannot be taken in properly securing the tops of all public wells against contamination by surface water or soakage. Dr. Ellis' report, I think, proves that the water in our wells when not so polluted is, though very hard, a first-class drinking-water. This matter of the purity of our drinking-water is the more important, since recent writers on the subject consider that Cholera is chiefly spread by the use of impure water.

3rd. Owing to the shallow nature of the soil in many parts of the town, the time is not far distant when we will be in a manner compelled to adopt some system of frequent removal of animal excreta and refuse vegetable matter. At the present time the dry earth system would seem the best adapted to the needs of the town.

4th. Either there should be a vigorous effort made to prevent the pollution of the river, or else, restriction on the use of ice and water therefrom, it being a notorious fact that the ice, cut to supply the town, is taken from the parts of the river near the town, where the ice forms the thickest; that is, where the current is the slowest, and hence, most likely to be polluted.

5th. Various theories having been advanced as to the cause of the prevalence of Diphtheria here during the last year, it may be expected that I will here express an opinion thereon. Previous to the outbreak of this disease our town deservedly had the reputation of being one of the healthiest places in the Dominion, and while our sanitary condition may not have been all that we could have desired, there was no apparent reason why the disease should have obtained so great a foothold had proper care been taken to thoroughly isolate the first cases that occurred. Unfortunately for numerous families and for the business interest of the town, no attempt was made to isolate the first two or three families where the disease broke out; hence we had the germs or poison of diphtheria disseminated over a large part of the town. Now it is fully authenticated among medical authorities that this poison retains its vitality for a long time, probably many months if not years; and this being the case a fresh outbreak will occur whenever some unfortunate child is brought in contact with some of this virus. At present we are free from the disease, and let us hope that the method we have pursued, of promptly isolating afflicted families, together with free use of disinfectants, will soon have destroyed every particle of the poison.

6th. Before concluding my report I wish to call your attention to another threatening danger of an alarming nature. I allude to the prevalence of Small-pox in a neighbouring county, connected with this by line of railway. You are aware that a few cases of this disease occurring here would effectually ruin the trade of the town for a long time. How many children and adults are there here who are unprotected by vaccination? I venture to say hundreds, and in this connection I would suggest that the Board procure

a supply of vaccine, pure and fresh from the cow, and pay a qualified physician such a sum as may be agreed on, to vaccinate all requiring its protection. In conclusion, I consider the Board has done a fair share of good work during the brief period of its existence, and trust their successors, whoever they may be, will pursue a similar enlightened course.

J. S. McCALLUM, M.D.

PERTH.

St. Marys Town.

In presenting this our first annual report to your honorable body we would congratulate you on the success of your efforts in establishing a Board of Health for the Province of Ontario.

There is no doubt that if carried on in the same spirit it has been heretofore, it will be a great boon to the people.

In starting out on our labours we found considerable dissatisfaction by some persons, thinking, no doubt, we were making ourselves too familiar with the state of their premises; however, that soon died away and we found no opposition offered us.

Throughout the town the general state of the premises with few exceptions was very good, and those complained of were remedied as soon as notified.

The question that will have to be grappled with eventually, will be a proper system of drainage for the town, whereby excreta, slops and other household refuse can be carried away or disposed of by other means.

Our water supply is excellent, having many flowing wells in the town; though if a proper system of waterworks were introduced would be much better.

We would recommend the closing up of the graveyards at the east end of the town, so far as interments are concerned, as they are being rapidly filled up.

No case of contagious or infectious disease has appeared amongst us, as we have no swamp or drowned land or stagnant water within the municipality, but on the other hand we are high and dry, with plenty of limestone around us and every sign of prosperity.

H. FRED SHARP, Chairman.

W. WILLIAMS, Secretary

Town of Stratford

CHAIRMAN'S REPORT.

As early in the spring as possible, notice was given calling upon the citizens to make a general cleaning up of their premises. Your Board has great pleasure in stating that the result was satisfactory.

Your Board carried out a regular system of sewer flushing throughout the warm weather.

Your Board is happy to state that during the year very little sickness has prevailed, and none of an infectious or contagious character. The death rate has been very low, only sixty-six, as shewn by the cemetery registers.

ISAAC RIGG,
Chairman.

MIDDLESEX.

Town of Strathroy.

The Secretary of the Board, in compliance with the requirements of the Public Health Act of 1884, begs to report as follows:

That the Municipal Council of the Town of Strathroy manifested a ready acquiescence with the several enactments of the Public Health Act, by the appointment at the May

meeting of three members, Messrs. F. A. Frank, W. B. Walker and John Iver, who, with the Mayor and Town Clerk, the *ex-officio* Secretary, composed the Board of Health for the town.

The Municipal Council, further to comply with the new state of things, and believing in the necessity of some legislative action towards the public health, passed the by-law furnished by the Public Health Act; and although not actually repeating the existing town by-law, which had been prepared with some care, enacted a clause providing that in all cases where there seemed to be a conflict between them, the Public Health Act was to rule and take precedence of the Town By-law.

The Board has appointed and held regular meetings on the last Friday preceding the first Monday in each month, with a view to bring before the Council any monetary matters requiring attention at the regular meetings of Council on the first Monday of the month, and the Board has no difficulty in the way of expenditure, which has always been satisfactorily met by the Council.

The Inspector, who has been zealous and active in the discharge of his arduous duties, has made a personal house to house inspection of the premises throughout the town, and has recommended the thorough cleansing of water-closets and premises generally, and has succeeded fairly well in accomplishing thus much. Next year it is intended to give attention to the wells, the water in all of which in this town is situated near the surface, and rises through a quicksand which prevails all over the town.

The site of this town is a dry sand with an ample supply of water for all domestic purposes, during the driest of seasons, at the distance of eight or ten feet from the surface; and upon the whole the town is considered very healthy.

The Board caused to be printed for circulation some of the most striking and important clauses of the new Act to aid the Inspector in his duty, which had a good effect. Also the requisite slips were sent to the several physicians of the town whereon to report the existence of contagious and infectious diseases, and the Board is glad to report that no return has been made.

It is true there have been some few cases of malarial fever in the town, but none of a character so far as this Board knows, requiring to be reported by the town physicians.

The question of public health is one that commands our best attention, and it is vain to expect the public to comply closely with the elaborate provisions of the Public Health Act all at once; it is satisfactory, however, to know that a good deal has been done in that direction, and in order to insure success, the Board feels it must have the cheerful and ready compliance of the people themselves with all its requirements.

J. B. WINLOW,
Secretary.

HASTINGS.

Town of Trenton.

CHAIRMAN'S REPORT.

The town is built on both sides of the River Trent near its mouth, partly on the ancient river bed and partly on a high table-land which rises by one step on the east side and by three—in one place four—natural terraces on the west side, attaining at the highest point to an elevation of 190 ft. above the bed of the river. The soil in the higher portion is composed of limestone, gravel and sand, and in the lower of alluvium, overlaid near the base of the terraces with free lime, decomposed shells, etc., and covered by human or decayed vegetable matter to a depth of from a few inches to more than a foot, the whole resting on a bed of shaley limestone. From the base and sides of the terraces numerous springs of water issue which interlock on the level lowland, where the most thickly inhabited portion of the town is built. The houses, here for the most part without cellars, are erected over the wet soil, and owing to the damp floors are unwholesome and even dangerous, on which account cleanliness and drainage are of the utmost importance.

Into this thin, often semifluid, soil have been annually poured the sewage of kitchen, stable, sty and privy, in some parts for a period of forty years, which it has been compelled to take up by absorption or mixture, and thus add to the already unsanitary condition enormous quantities of organic poison. As might have been expected, diseases of miasmatic origin prevail for many months of the year. That matters are not much worse is due to the drinking-water which is supplied from the first terrace by gravitation through wooden pipes and is of excellent quality, except for an excess of the salts of calcium, but owing to the absence of effective drainage the overflow from the tanks is left to percolate through the soil at will and thus contribute to the dirt, dampness and discomfort of the streets, lanes and yards.

On the east side of the mouth of the river immense quantities of saw-dust have been deposited in shallow water, and during the heat of summer fermentation and other gases are exhaled, sometimes with audible explosions, and mingled with the air, is breathed by those living in surrounding higher localities; and from this cause, as well as the too great proximity in such porous soil of the well, stable and privy, the dwellers on the hill also are sometimes affected with miasmatic diseases.

The principal manufacturer of lumber has, however, with commendable enterprise erected an immense furnace where all the saw-dust and waste are consumed as soon as produced, so that in course of time the soil will vanish.

The principal efforts of the Board were directed against the unclean stables, sties and privies, and while many entered heartily into the work of cleansing foul premises, others regarded the intrusion of the officers as an uncalled-for interference with their liberties, and were with difficulty prevailed upon to undertake the removal of unsavory accumulations of filth. The Board treated these with perhaps too much forbearance, hoping that reflection would convince them of the absolute necessity of every citizen seeing to it that his negligence shall not stand in the way of his own or his neighbour's comfort or safety.

In the case of drainage of stagnant water by permanent drains all except one complied with the mandate of the Board, and, in the absence of an epidemic traceable to this cause, they are not satisfied that the Board has a legal right to enter upon private property and carry out the work.

The Health Inspector made a house to house visitation during the season and reported as follows:

Number of pig-sties too near dwellings	140
Number of privies requiring cleaning or removal.....	70
Number of filthy yards.....	30

We have to report that this indefatigable officer continued to revisit these premises, till he is now able to report all in a fairly good sanitary condition.

The Chairman has to record his satisfaction that the members of the Board responded promptly to his calls, and took an active interest in the progress of the work.

CHARLES McLELLAN, M.D.,
Chairman.

—
BRUCE.

Town of Walkerton.

In reply to your circular of the 21st October last, I have the honour to report as follows:

The Board had posters printed and posted around calling upon all parties to observe the new by-laws in regard to health and nuisances, and warned the public that after 1st July the provisions of the Public Health Act would be strictly enforced.

On 27th May the Mayor, Clerk, and Messrs. Smith and Hume inspected the back premises, etc., of central part of the town and took notes of all that they thought was required, and in the evening the Board held a meeting when it was resolved: That 200 notification circulars be printed, and parties in default be served with written notice to remedy and abate each special nuisance.

Notices were served upon defaulters to the number of twenty-nine by the Inspector, and he afterwards reported that the nuisances had been abated.

At this meeting it was resolved: That the Council be requested to describe exactly what kind of closets should be permitted in town, and to pass a by-law to that effect.

This has never been done. A resolution was also passed at this meeting requesting the Council to order the cleaning up of certain back lanes in a dirty condition, and to have a certain drain deepened and cleaned out. This was attended to.

The foregoing is about the extent of the work done by the Board.

The Medical Health Officer has not reported, and it is intended to appoint a new Medical Health Officer at the next meeting of the Council this week.

The Inspector has performed such duties as the Board decided.

The Board has held four meetings.

JOHN CHAMBERS,
Secretary.

WATERLOO COUNTY.

Waterloo Town.

SECRETARY'S REPORT.

A Local Board of Health was duly organized in this town, and a Medical Health Officer was appointed but without salary. The general sanitary condition of Waterloo has received attention from the Board. With the exception of a few cases of Typhoid Fever, two of which proved fatal, there have been no other diseases of a serious character reported.

I believe that by systematic preventative precautions being taken very little, if any, contagious or infectious disease could possibly gain an entrance amongst us, and to this end it is the duty of the Board to act according to the provisions of *The Health Act*. There are no slaughter-houses within the municipality.

T. COLQUHOUN,
Secretary.

HURON.

Town of Wingham.

CHAIRMAN AND SECRETARY'S REPORT.

According to *The Public Health Act, 1884*, the Council of the Corporation of the Town of Wingham, at a regular meeting on the 7th day of May last, appointed by by-law a Local Board of Health consisting of five members.

Previous to appointment of the Local Board of Health the Municipal Council appointed a chief constable, part of whose duty it was to act as Health Inspector, which officer has acted as the Sanitary Inspector of the Board since its organization.

The principal work of the Board for the present year was rather to ascertain the sanitary or unsanitary condition of the town, than to make sanitary improvements, except where such cases were found, the condition of which demanded immediate attention.

To obtain this information, the Chairman of the Board together with the Inspector made a tour of the town, inspecting particularly those places the outward appearance of which as well as information they had obtained, led them to believe were not in a very cleanly or healthy condition.

The principal sources of uncleanness were found to exist in the backyards of the business centre of the town, where the refuse from the houses was deposited or allowed to accumulate. Some water closets and pig pens were also found in a filthy state, and in

one case offensive and unsanitary business carried on in connection with a butcher shop. As a result of this inspection the offensiveness of the latter place was removed, and it became perfectly clean, and the conditions of many of the water closets and pig pens were much improved.

This town has yet no by-laws regulating water closets, consequently they are of various structure; in some cases the dry earth or ash closet is in use, but in most cases they are made of a small house erected over a pit which receives the excreta; these pits vary in depth from two to four feet; when these pits become full or too offensive the excreta is disposed of by being removed and buried in the ground.

As I have before mentioned it has been the duty of the Board this year to see that accumulated refuse is removed, and these offensive backyards kept clean, and in most cases in this respect the Board has been successful.

As this has been the first year our town has had a regularly organized Health Committee, we did not deem it prudent to adopt any very radical or extreme measures in sanitary improvements; but we expect that the Board next year will make more important sanitary improvements in our town, until it reaches a satisfactory condition in this respect.

Part of the town is supplied with a sewer, but the system is not yet extensive enough to be of much benefit to the community at large. This matter, however, we expect will engage the attention of the Board at a very early date, and a perfect system of sewerage will, no doubt, as soon as possible be constructed.

I may also add that our town, situated as it is on a beautiful spot on the bank of the River Maitland, in a very healthy part of the country, does not require as much labour to make it a clean and healthy place as other towns not so favourably situated in this respect.

WALTER SCOTT, Chairman.
J. B. FERGUSON, Secretary.

ESSEX.

Windsor.

MEDICAL HEALTH OFFICER'S REPORT.

In compliance with section 7 of By-law No. 430, I beg leave to submit the following report:

During the year ending November 15th, 1884, Windsor has been remarkably free from disease of all kinds. Contagious diseases, which in previous years have been somewhat epidemic, have this year been only sporadic. This is due partly to favourable atmospheric conditions; partly to the precautions taken by the Board of Health to secure isolation and disinfection, and partly to the interest taken by the community at large, to guard against disease by practising greater individual cleanliness, and by exercising greater vigilance in preventing infected persons coming in contact with the public.

Whilst there has been a general disposition on the part of the medical profession and the public to carry out the law in both letter and spirit, there are strong grounds for believing that there were concealed cases which conveyed disease to others.

Ignorance of the nature of disease was the excuse generally given when an attempted concealment was detected. This was excusable if true, but an elastic conscience occasionally caused unsuspecting neighbours and friends to contract disease which terminated in death.

Having occupied the position of Health Officer for three and a half months only, I cannot review the year's work from a personal knowledge of what has been done.

A supply of copperas and sulphur was purchased and put up in small packages, and sold at a slight advance of cost price.

A great many people availed themselves of the disinfectants, as about 1971 lbs. of copperas and 365 lbs. of sulphur were sold in two and five pound packages.

A great many nuisances have been abated by the Inspector without making an

information before the police magistrate. Only one conviction has been made, the by-law being too defective to secure a conviction in many instances of culpable neglect.

The present by-law has many defects, some of which I have already pointed out to the Board.

The Statute seems to be comprehensive enough, but the by-law, schedule A, of which the town by-law is nearly a transcript, seems to be framed without reference to the Act, and is useless for practical purposes.

It seems strange that the Judicial Health Officer is not made a member of the Board. His functions are merely advisory, and he has very little executive power. Until a change is made in this respect, the Medical Health Officer will be only an expensive and comparatively useless appendage to the Board of Health. But if he were clothed with the requisite authority his field of usefulness is very large, and no officer of the corporation could give better value for his salary.

As at present constituted, the Board of Health is unwieldy with nine members; five are necessary to form a quorum, and experience has shewn that it is difficult to get this number present.

I would recommend that a house to house visit be made by the Inspector, and a description of all premises filed in the Secretary's office. This will take considerable time to accomplish, as the Inspector has other duties to perform, but can get through with the greater part of it during the winter.

All permits for slaughter-houses and offensive trades should be recalled, and only re-issued after inspection of the premises.

It will be necessary to employ two or three scavenger-carts next year. If people know that on certain days offal will be regularly taken away they would be at more pains to collect it, and there would be no excuse for allowing it to remain scattered or concealed about their premises.

J. COVENTRY,

Medical Health Officer.

SECRETARY'S REPORT.

During the year just closing the public health has been such as to afford the utmost satisfaction to all those (including, I believe, the Board of Health) who are directly chargeable with the passing and enforcing of regulations to prevent the occurrence and spread of disease within the limits of the Town of Windsor.

The construction of a number of brick sewers along thickly populated streets, where hitherto at best, only old, decaying box drains existed, by means of which sewers private premises fronting upon them have not only been effectually drained, but the surface water from large areas of low, flat sections thoroughly and rapidly carried off, no doubt contributed largely to the very gratifying result.

The efforts of the Board and its officers to induce the people at large to pay closer attention to the condition of yards, out-houses and alleys, while not as successful in many cases as was desired, have undoubtedly resulted in a very decided improvement. Resort to legal action has only been had in a few extreme cases; and with the moral effect ensuing from these prosecutions, coupled with continued exertion on the part of the Health authorities during the present winter, it is believed the people generally will in future do their part towards the complete abandonment of the old, objectionable, health-endangering habit of permitting the accumulation of garbage, horse-dung and night-soil upon their premises for an indefinite period.

It is believed that some of the comparatively few cases of Scarlet Fever and Diphtheria that have occurred during the year, have been caused by parties exposed to infection coming into town from other places, where but little attention is paid to isolation; and it seems absolutely necessary, in order to arrest danger from this source, that the Board should adopt stringent measures to prevent people so exposed mingling freely with our inhabitants.

STEPHEN LUSTED,

Secretary.

CHAIRMAN'S REPORT.

As required by section 9 of by-law No. 435, respecting the Public Health, I herewith present to the Municipal Council a report or detailed statement of the work of the Board of Health during the year, and more particularly since its organization on the 28th July last.

Accompanying herewith is the Report of the Medical Health Officer upon the sanitary condition of the town.

At the date of this, my report, I am glad to say that there are no cases of Scarlet Fever or Diphtheria existing in the town.

Since its organization the Board has held four meetings. 1,000 copies of the Health By-law, before referred to, were printed, and a large portion thereof were distributed in the town. The circular "A," mentioned in the Medical Health Officer's Report, was likewise issued by the Board and distributed to every house in town.

The consideration of the defects in the present by-law, as mentioned in the Medical Health Officer's Report, has been referred to the advisory committee of this Board, who have not yet reported as to same.

The Board purchased 1,971 lbs. of copperas and 365 lbs. of sulphur, the greater portions of which were sold, as mentioned in the annexed report. These disinfectants were also furnished gratis in many cases to poor applicants.

The amount granted and placed to the credit of this Board by your Council was \$500, which, with the amount at the credit of the previous Board of Health, \$300, make \$800, and all accounts and salaries due by the Board to date, amounting to \$541.60, having been paid, there still remains to the credit of the Board the sum of \$258.40.

The building known as the "pest-house" was recently inspected, the furniture and effects therein overhauled, and an inventory of the same taken and found in good order.

FRANCIS CLEARY,
Chairman Board of Health.

—
OXFORD.

Woodstock.

CHAIRMAN AND SECRETARY'S REPORT.

In conformity with the statutes on that behalf, this Board begs to report as follows :—

The Board since its organization has met thirteen times, transacting considerable business relating to the sanitary affairs of the town.

An Inspector was appointed, who has made a house to house inspection, reporting to the Board at each meeting upon all matters coming under his notice.

The Board had great difficulty, when first established, in the enforcement of the removal of excreta, etc., as there was no regular way by which the inhabitants could cheaply have this service performed, but now by owning a scavenger cart and appointing scavengers under the direct control of the Inspector, this difficulty has been removed.

The Board has endeavoured to, as far as possible, educate the citizens to the advisability of doing away with cesspools and privy pits, and to adopt the dry earth system in lieu thereof, and are much pleased to know that their advice has in many instances been acted upon.

The Board very much regrets that the Town Council do not enforce the by-law against using the common sewer for water closets, etc.

The Board is pleased to know that the town has been healthy during the past year, and trusts that whoever may have the honour to belong to this Board next year will use every effort to extend the good work now begun, as we feel assured that at no great expense Woodstock can be made one of the most healthy, as well as the most beautiful towns in Ontario.

WILLIAM GREY, Chairman.
J. C. EDEN, Secretary.

SANITARY INSPECTOR'S REPORT.

I made some 456 house to house visits and found some 376 premises clean, and well-water comparatively good, and found some 80 premises unclean, and water not good, and have had 18 wells examined and found to be bad, and the same have been cleaned out and are fit for use, excepting two, namely, the well at the court house, and Mrs. Pocock's in rear of Spracklin's harness shop, the former cause being old pump logs, the latter being yard full of old privy pits draining into the well after heavy rains; the principal cause of bad water is owing to the poor covering to well, not sufficient to keep the toads out. There have been some 30 outhouse pits cleaned out and twelve filled up with earth, and adopted the drawer or dry earth system, to be emptied monthly and every three months. The following is a list of those that have adopted the drawer or dry earth system: *Sentinel Review*, Oxford Building Society, James Scott, W. H. Millman, Thomas Organ Factory, John Head, Dickenson & Cranston, Scott & Son, George Caldbeck, J. & T. Grant, Stark & Rippon, James Scarff's Central Hotel, Fred. Hayward, and D. C. Richmond. Partly filled up the others, using again as formerly. I made several visits upon hearing complaints, which were only trifling, excepting three, those being nuisances in the rear of the Royal Hotel and the Thomas Organ Factory, who complied with the law after being served with notification, excepting Mr. James King, in the matter of a slaughter-house, being inside the corporation, about 16 feet the width of the building, otherwise it is not within 250 feet of any public highway. I find that the greatest trouble is with the keeping of pigs, as people will keep them as long as the law will allow them, and a great many will not keep them as clean as they should be, thereby causing a stench to arise. There was considerable complaint that there was no scavenger to take away all kinds of offal, and people with small yards could not keep them clean as they would like, especially in the rear of the stores. I omitted to say that I inspected a number of the hotels and banks supposed to be using the sewer unlawfully, and the following are doing so: Fred Hayward, for soap suds, etc.; Imperial Bank, for water closet; O'Neil House, for the same and soap suds; Caister House, for chamber water and soap suds; Nesbitt Bros., for washing bottles; James Scott, for soap suds and water from washing bottles; Molson's Bank, for water closets; Royal Hotel, all kinds of dirty water; North American Hotel, for soap suds, etc. There are about fifty residences that have drawers or boxes in their privies, and two residences that have water closets in connection with the house, that I have inspected; they are: Dr. Springer and Mrs. Emigh. Owing to the man that was appointed to work the cart being a stranger in town, I had to take and show him where to work and see that he did it right, and did considerable running to get a place to put the material; but I did not go over the whole town as I would have liked to have done. There was so much rain this fall that I did not get so many privies emptied as I would have liked. With loss of time by rain, and man being sick occasionally, and having some severe weather, the number of privies attended to looks small, but still a large amount of work was done; would take from three to five nights with two men to clean some of them. I would also mention that all new privies built in connection with new residences are made with drawer or bin for dry earth, with the exception of those in outskirts of the town. The Messrs. Bale and Sherwood have constructed theirs on the bin system; Mr. Chaplin has constructed his on the drawer plan, and connected his sinks for carrying off all kinds of dirty water by the sewer, etc. Not having a settlement with all the parties that had work done, I cannot give a financial statement to-night. Before concluding my report I would recommend the purchase of a waggon for the purpose of going around every morning, and gathering up all sweepings and offal that may accumulate from day to day, in connection with the stores.

W. H. WHITEHEAD,
Inspector.

VILLAGES.

SIMCOE.

Alliston Village.

The Local Board of Health for the Municipality of Alliston, established under the provisions of the Public Health Act for 1884, beg to report :—

That they have made no special efforts during the current year to enforce the laws relating to public health in this municipality, but are determined to perform their duties under said Act in future. With this end in view the Board had a meeting on the 7th November, at which they instructed the Clerk to get 500 copies of the Public Health Act for 1884, for free distribution among the citizens of Alliston to educate them in the vital matters of public health and the prevention of avoidable disease. This is the only practical step taken by the Local Board, in the fulfilment of their duties under the Act establishing said Board.

H. WRIGHT, Chairman.
J. C. HART, Secretary.

LAMBTON.

Alvinston Village.

CHAIRMAN'S REPORT.

Population, 1,400. Situated on the west bank of the Sydenham ; is easily drained, and the water supply is abundant at an average depth of seven or eight feet. The soil to this depth is loose and porous, hence the wells in the more densely occupied parts must be rendered more or less impure by surface water. There is a live Board of Health. The Board has an Inspector. A good deal of useful work has been done, chiefly in educating the people in sanitary matters, and the requirements of the law. The dry earth system has been adopted, and enforced with some measure of success. All privies were ordered to be cleaned, and provision was made on that behalf by the Board. The work of reformation thus begun will be vigorously continued in the spring. There is a good deal of opposition to the dry earth system. I am, however, thoroughly persuaded of its advantages over all other methods of disposal. For the schools and hotels the Board ordered water-limed vaults, constructed so as to be readily cleaned. On the whole, the sanitary condition of Alvinston cannot be said to be bad. The health of our people has been good throughout the year.

ANGUS MACKINNON, M.D.,
Chairman.

LAMBTON.

Arkona Village.

We beg leave report as follows :—That we met and organized on the 19th day of May, 1884, and immediately got out and posted up posters warning every inhabitant to thoroughly cleanse and otherwise put his or her premises in good sanitary condition, which we have much pleasure in stating has been generally complied with, and we believe this has been the quickest method to get the municipality in good sanitary condition. On the second day of July, 1884, we were so unfortunate as to have a great portion of the business part of this village destroyed by fire, but thereby further purifying the thickest settled part of the municipality.

Slaughter-houses are removed over a quarter of a mile from boundary of village, and over seventy yards from any public highway.

The Inspector reports no complaints during the year.

The Medical Health Officer reports no complaints, but advises the Board to prevent parties from taking the corpse into the church at funerals (a practice which is in vogue in country places), as being offensive and in cases dangerous.

The Board have taken action in the matter, prohibiting the practice.

He also reports the public school in good sanitary condition.

W. VAHEY, Chairman.

G. B. STEPHENSON, Secretary.

PETERBOROUGH.

Ashburnham Village.

MEDICAL HEALTH OFFICER'S REPORT.

In presenting the first annual report of the Medical Health Officer, I have pleasure in saying that during the past season no outside epidemic has visited the village, nor has there been any marked development of those infectious diseases that appear from time to time in most municipalities and are often considered unavoidable. The sanitary work done, however, has been important, not so much in itself as in directing the attention of the public to the necessity for this work in the prevention or amelioration of many of those diseases that afflict mankind.

Sanitary duties are of two kinds, municipal and individual. I am glad to say that in Ashburnham there are none of the former that demand special attention. Municipalities having neither bodies nor souls don't get sick, and are, consequently, slow to act in matters of this kind, which is apt to have an unwholesome effect on private individuals. To be sure, we should like to see good sewers carrying all the refuse of the village to a safe distance; but the majority of the houses being fairly isolated there is no pressing need for that bugbear of all rapidly growing corporations. In proportion, however, as municipal duties are light, individual duties are important, and it is in reference to these that I have most to say to-night. Many of the houses inspected were found almost as faultless as if they had a Board of Health all to themselves, but I am bound to say that in many other cases there was woeful neglect. Stables and privies were too near wells and houses, garbage was allowed to accumulate in the yards, manure heaps to fester under the very windows, with judicious sprinkling of slops, probably to prevent them from drying and being blown away. There is nothing surer than that this sort of thing breeds disease and attracts epidemics. When a wave of cholera sweeps, as it may soon sweep over the country, it will just as certainly select towns marked with these blots as a vulture will light where there is carrion. Cleanliness, first of all, is the great precautionary measure. By presenting a sanitary cold shoulder to cholera or any other plague, more lives will be saved than by all the combinations of the pharmacopœia where it has come. The usual mode of disposing of excreta is by the ordinary privy-pit. This does well enough for a time in new ground, but when the ground becomes saturated it is a source of danger to wells even at long distances, and besides, loads the surrounding air with impure and unhealthy gases. A number of those too close to the houses have been removed and the use of dry earth recommended. A good many are using dry earth in the vault, but I certainly would advise the discontinuance of the vault altogether. A simple form of earth closet can be made by any carpenter. A drawer for the deposit and a box containing equal parts of ashes and dust, of which a pint or so can be thrown on by any one using it, are all that is necessary.

The excreta may be removed at intervals, and is an admirable manure. The assimilation is so complete that it may be taken away without the slightest offence. To correct a common error, I may say that sand is useless, clay or loam dust is needed. For those

who prefer them there are various automatic kinds. One is manufactured in Peterborough by Mr. Clegg, which has the approval of the Provincial Board. A company has been started in Toronto for the manufacture of an English closet. For the sake of sanitary science, I hope we shall soon be as much pestered by agents for earth closets as by sewing machine or lightning-rod men. A great many pigs are kept in the village often for purposes of economy in getting rid of table refuse, a better way of disposing of it than heaping it up in the yard. The Inspector has had a good many removed from near the houses to the prescribed distance. A common practice is to let them run about on a soft piece of ground, which soon becomes ploughed up into an unsavoury mud salad. Instructions have been given to have these places properly gravelled and drained. There ought to be more stringent arrangements for the removal of garbage. This is not done as frequently as the law directs, and, in consequence, a good deal accumulates about houses. It should be put in a covered barrel or other receptacle, and removed at short intervals by a carter who has a personal interest in attending to it. There is but one slaughter-house in the municipality. Inspection has been regularly made, and it has always been found in good condition. One good point is that no pigs are kept, and another that all the offal is carted away immediately out of the village. I have examined some of the wells and find more or less of organic matter in the water. It should be remembered that no well water is absolutely pure. From the very nature of the case a well is a sort of a drain that attracts to it currents from all around. If properly isolated the danger is reduced to a minimum. The pleasant taste of many well waters, as compared with that from rivers and lakes, is due to the mineral ingredients and to the gases which give them sparkling properties. But it should not be forgotten that water may be clear and sparkling, and yet hold *infusoria* and *bacteria*, the frequent causes of bowel complaints, typhoid and other diseases. Filtering through the earth does not always stop this, for the efficiency of that process depends upon the purity of the filter, and who can guarantee that? Even supposing the earth to be originally pure, the very act of filtration which is constantly going on tends to foul it, and to change the filter is impossible. Hence the most rigid precautions should be taken to keep as much soakage as possible from getting into the wells. Not being in a position to secure water-works, and thus being compelled to rely on wells for a long time to come, renders care in each particular case imperative. This being the first year of the Board it was late in starting operations, so that the requirements of the statute as to cleaning of wells have not been thoroughly carried out. This should be one of the first precautions early next spring. The saw-dust nuisance is an important one, but does not claim much notice here, as it forms the subject of a circular from the Provincial Board. As I said in the report to the Peterborough Board, what concerns us is this—That half a dozen saw-mills are discharging into the Otonabee River an amount of saw-dust equal to about ten per cent. of their output of lumber, that a large quantity of this finds its way into the Little Lake and remains there, that there it is mixed with sewage and refuse of all kinds from the town and surrounding shores, the filling up going on slowly but surely; so that to say nothing of present annoyances there is great danger of the lake being ultimately converted in part or in whole, from a beautiful sheet of water, admirable for purposes of recreation, into a vast malarious marsh compared to which Spaulding's Bay would be a rose bed. Strong measures ought to be taken. A law was passed some time ago to protect fish; let us have something now to protect men. The condition of the village streets demands a word. Though comparing favourably with those of other places, too much refuse finds its way from the houses and is ploughed up by the mud, by and by decaying and being blown into people's lungs the first dry and windy day. A little care, public and private, would lessen that materially. A house to house inspection in accordance with a form issued by the Provincial Board is being carried on. The minuteness of the details necessitates considerable time for its completion. A number of notices have been served in cases of nuisance, but have been complied with, so that no prosecutions were needed. Regarding infectious diseases, a few cases have occurred. When reported, placards have been put up. On enquiry I find that some unreported cases have occurred, principally, I suppose, from inadvertence on the part of the medical attendant. An occasional reminder will rectify this in future, and the obvious advantages of the law will lead placarding to be looked upon with less disfavour, and encourage both medical men and

the public to co-operate in the isolation of infectious diseases. I may say that typhoid fever cases are not placarded. It is not a contagious disease in the same sense as small-pox. In the hospitals typhoid cases are placed in the public wards indiscriminately with others. In conclusion, I think a good commencement has been made. People's attention has been aroused, and that is a good deal in itself. Education is better than force, for it is the gradual upbuilding of the strongest force of all. To give every man, woman and child in the municipality a sanitary conscience, an intuition or instinct, call it what you will, keen enough to recoil from all uncleanness, and the manifold forms of sanitary error, as from the face of a serpent, ought to be the supreme object of every Board of Health. I intend next spring to write a series of letters to our newspapers dealing with sanitary subjects around us in a practical manner. The circulars of the Provincial Board are issued in too small quantities to be of any real service. If the public can get useful information, the stimulus of mutual improvement will enable them to profit by it, and in other years we shall see as little necessity for compulsion as I am glad to say we have seen in this one.

J. C. CLARKE, M. D.,
Medical Health Officer.

Detailed account of sanitary work done in the Village of Ashburnham for the year ending 15th November, 1884 :—

No of closets removed.....	22
“ yards cleaned.....	37
“ pig pens removed.....	20
“ wells cleaned.....	18
“ manure heaps removed.....	13
“ deposits of surface water, drained.....	8
“ hen house removed.....	1
“ rubbish heaps removed.....	12
“ notices served.....	21

Infectious diseases reported :—

Typhoid Fever.....	1
Scarlet Fever.....	3
Cases placarded.....	3

ELGIN.

Aylmer Village.

SANITARY INSPECTOR'S REPORT.

In reply to your request I take pleasure in stating that since the formation of our Sanitary Board of Health in May last, I have made twenty-seven visits, and succeeded in removing the only two slaughter houses that were inside the corporation outside the village limits ; also a number of pig styes and hen pens to greater distances from private residences, and having the premises properly cleansed.

But the greatest nuisance that I have found in our village is the privies, which I have had some difficulty in getting properly cleansed and arranged. In the majority of cases the people appear to be willing to comply with our request, but are at a loss to know how to proceed, from the fact that labourers refuse to perform such work as cleansing and arranging them.

I have very strongly recommended the dry earth closet, and in some cases have succeeded, and hope during next spring and summer to succeed in getting this system generally adopted throughout our village ; and upon the whole our premises have been considerably cleaner than they were in the past. We gratefully acknowledge that during the past season our people have been quite free from all kinds of epidemics, and the death rate has not been large.

J. E. McDONALD, Sanitary Inspector.

LINCOLN.

Beamsville Village.

SECRETARY'S REPORT.

One of the provisions of *The Public Health Act, 1884*, requires the Secretary to draft an Annual Report of the work done, and of the sanitary condition of the municipality, and lay it before you for consideration and adoption.

We had no meeting later than the 6th September last, and it did not then seem necessary to prepare a report, nor indeed was the business of the Board then closed for the year. No report was therefore brought in, and the present is the first opportunity there has been for submitting my report of the work of this Board for the year 1884.

The Municipal Council acted upon the law, assented to on the 25th March, promptly, and appointed members of the Local Board, Medical Health Officer, and Sanitary Inspector, on 5th May. Owing, however, to refusals of some the Board was not completed until June, and all through the year was deprived of the counsel and services of a Medical Health Officer.

The first meeting was held 19th May, at which James Paton, Esq., was elected chairman. At this meeting public notice was directed to be given that a close and general inspection of all houses, barns, cellars, wells, water closets, etc., would take place on or about the 10th day of June, and requiring the removal of manure heaps and garbage, the cleaning of hog pens, and the thorough cleaning and deodorizing of privies. A second meeting was called for Saturday evening, 12th July, but owing to absence of members, no business was transacted.

The next meeting was held July 17th. At this meeting the Sanitary Inspector reported verbally that he had made the house to house inspection required, and that the condition of things as he found them was satisfactory in nearly every case. The exceptions reported were five in number, three in respect of violations of Rule 7 of sec. 14 of the Statutory By-law, providing that between 15th May and 1st November no hog shall be kept within the limits of the municipality, except in pens 70 feet distant from any house, with floors kept free from standing water, and regularly cleansed and disinfected. The two other cases were the condition and situation of privies. The Board directed the Sanitary Inspector to give the parties occupying the premises the necessary notices, stating in each case a reasonable time within which the nuisance should be abated.

A fourth and last meeting was held on 6th September. At this meeting there were four cases of violation of the by-law reported, and the Inspector further reported that the parties though warned refused to conform to the law. The Board thereupon directed the Inspector to prosecute any who, after one more notification did not meet the requirements of the law, and all the parties at the last moment did satisfy the Inspector and obey this most righteous law, enforcing cleanliness and decency. A single prosecution for breach of the law was pushed to conviction. The penalty and costs of prosecution were made without issue of final process. In this the offender was guilty of breaking section 8 of by-law.

Such in brief is a narrative of the first year's work of the Local Board of Health of the Village of Beamsville. The sanitary condition of the village, it is pleasing to report is very good. There was in the year a single case of Diphtheria of a mild type, and there was among children a few cases of Diarrhoea (four resulting fatally) in the early weeks of the fall, otherwise the village was remarkably healthy through the whole year.

In commenting upon what has been done, I may be permitted to say that the Inspector and Board having new work thrown upon them have probably acted wisely in erring, if they have erred, on the side of leniency and slowness. At the beginning the importance and desirability of a Local Board of Health, armed with ample powers to enforce its mandates, was not understood, nor had the Board in its first work the moral support of all the villagers. The inquisitorial character of the house to house inspection and the considerable number of tolerated nuisances that in the shape of hog pens, privies

and slaughter houses, had been for years an offence to, and matter of protest by those living on adjoining lots, made the enforcement of the Act with some seem ungracious and tyrannical. It may be, therefore, that it was well last year to move slowly and suffer long with those who were offending. But the whole value of the Board of Health will lie in just the opposite direction. Nuisances affecting the comfort and health, possibly the lives, of neighbours must be vigorously and swiftly dealt with. A manifest wrong is done, it may be an irreparable loss is inflicted, by permitting breaches of the Act to continue for a day. In all clear cases of violations of the law there should be prompt prosecution of the offending parties.

I may also suggest that there should be much more of methodical detail and minutiae on the part of the Inspector in his examination of premises. His memoranda be taken down on the spot. Every part of the premises should be visited and examined by him personally and reported on, and nothing be taken on trust from others, and no house should be passed over, but the examinations should be equally close and thorough in all.

ROMAINE VAN NORMAN,
Secretary.

ESSEX.

Belle River Village.

SECRETARY'S REPORT.

Yours is to hand, and in reply would state that the Board of Health of this corporation did not find it necessary to apply the law to its full extent, on account that this corporation is so small, and there was no Medical Officer appointed, so I cannot make any report for this season. The only objection that there was here against the rule of the Board was a slaughter-house. The owner was fined, and every thing is satisfactory to the Board at present.

A. HAMEL,
Secretary.

PEEL.

Bolton Village.

CHAIRMAN'S REPORT.

I have the honour to inform you that as soon as it became known that a Board of Health had been appointed in this municipality, the inhabitants commenced putting their houses and premises in proper order, and what was clean before was made cleaner.

Only upon one occasion was the Inspector called upon to see to the abatement of a nuisance. Upon being notified, the party immediately removed the nuisance.

The village is in a good sanitary condition, no infectious or contagious disease having been present during the summer or autumn months.

Owing to the removal of the Medical Health Officer from the village to the City of Toronto, no report from him can be forwarded.

GEO. SMITH,
Chairman.

MUSKOKA AND PARRY SOUND.

Bracebridge.

MEDICAL HEALTH OFFICER'S REPORT.

In accordance with my duty as Medical Health Officer of this municipality and your request, I beg to lay before you as briefly, and at the same time as accurately, as possible a statement of my observations and experiences during the past six months.

While I have reason to congratulate the Town Council on the selection they have made in appointing the members of this Board and the work which they have accomplished, I cannot help urging upon you the necessity of further extending your usefulness, as members of this Board, to a careful and systematic study of sanitary science, school hygiene, and all matters pertaining to the public health; and this by an earnest and rigid enforcement of the Health Act, so wisely and so well framed by the Legislature for the prevention and spread of disease; for the safety, welfare and comfort of our people, which, if carried out properly, will render invaluable services to the public good.

During the time in which I have had the honour to act as Medical Health Officer of this municipality I have frequently had my attention drawn to low-lying lots, to accumulations of filth and garbage, and other unsanitary conditions prevailing in our midst. In a village like this where a proper system of drainage does not exist such evils as these are difficult to remedy, although, I must say that in all cases where it was possible under ordinary circumstances to improve the condition of affairs, the authority of this Board has been duly recognized and the order of the Inspector promptly obeyed.

But besides surface accumulations, we have another and more potent evil to contend with, and that is sub-soil dampness, which makes thorough drainage indispensable, and the inspection of your cellars an important part of the Inspector's duties. The removal of water, dampness or moisture of any kind, from around, about or underneath their dwellings ought to be the first and most important household duty of every family.

With regard to the water supply of this village, I regret to say that it is far from being all that could be desired; many of our wells are dangerous in many respects, some being low, giving surface water free access, others in too close proximity to privy vaults, manure heaps and other decomposing matter allowing the possibility of access of infectious germs, which must necessarily contaminate the water and render it unfit for use. I would suggest that a most thorough inspection of all the village wells be made at the earliest possible date, and a chemical analysis of the different waters be had.

With regard to the disposal of excreta, there is again the disadvantage of the want of a proper system of sewerage, which renders it useless to speculate on the possibility of any material enforcement in this respect. Under this head, however, I must say that the requirements of the Act have been satisfactorily carried out, thanks to the vigilance and energy of the Inspector who has been most active in regard to this important part of his duty.

The disposal of garbage is a matter which not only ought to be of interest to every householder, but should also claim the attention of this Board as being a matter of great importance, pertaining as it does in no small degree to the maintenance of the proper sanitary condition of our premises, which it is the chief object of this Board to preserve, as decomposing organic matter in the presence of heat and sunlight is one of the most fruitful sources of those poisonous germs, the frequent cause of summer complaints, typhoid and other fevers. While on this point I desire to call the attention of the Board to the existence of a very unsightly and unsavoury article, in the shape of a manure heap deposited on the public highway in front of one of our hotel stables, which not only obstructs the sidewalk, narrowing it until it is impassable, but actually renders existence in its proximity next to impossible from the offensiveness and foulness of its odour, a condition of things which should not be tolerated for a moment, and which I hope will receive the immediate attention of this Board.

On the whole, I am of opinion that the present sanitary condition of the village is as satisfactory as could reasonably be expected under existing circumstances. We have for the

past six months at least, enjoyed a comparative immunity from contagious disease, there having been but two cases of typhoid fever come under my notice, both of which I believe were contracted elsewhere ; and although several cases of low continued or bilious remittent fever have occurred, small-pox, scarlatina, diphtheria and other malignant types have been unknown to us, nor has a single case of malarial fever been known to exist, a condition of things which does not obtain in the adjacent townships, as in the township of McLean, in the vicinity of Trading Lake, some eighteen or twenty cases of a mild typhoid, some of which exhibited certain well marked malarial tendencies, have come under my notice.

With regard to vaccination, the requirements of the Act have as yet been carried out by some 75 out of 380 persons, as reported by the Inspector not vaccinated up to July 15th. This may be partly accounted for from the fact of the weather being so warm during the summer months, that it was deemed not advisable to enforce the law with regard to vaccination.

In concluding my report I must say that every credit is due the Inspector for the very thorough and efficient manner in which he has performed his duty, and would strongly recommend that in the interest of this Board and in the interest of this municipality, from a sanitary point of view, his services be again secured and his present, though very high, salary be increased.

All of which is respectfully submitted.

WM. F. SHAW, M. D.,
Medical Health Officer.

CHAIRMAN'S REPORT.

As Chairman of the Local Board of Health of the Village of Bracebridge, it is my duty to present to you a report of the work done by the Board of Health since its formation, and of the sanitary condition of the municipality.

A Sanitary Inspector and a Medical Health Officer having been appointed by your Council, a resolution was passed on the second day of June last that the Sanitary Inspector at once make a thorough sanitary inspection of the village, and report to the Board at the next meeting nuisances of every description existing in the village ; also the names of all persons between the ages of three months and twenty-one years who had not been vaccinated.

The Board at once issued placards, that all persons desirous of keeping pigs or cows within the limits of the village must first obtain permission from the Board of Health, and also gave notice that the Medical Health Officer had fixed certain times and places for the purpose of vaccination.

Permits have been issued to thirty-two persons to keep cows, and eighteen to keep pigs within the municipality, upon complying with the by-law.

On the 8th August last a case of typhoid fever was reported to the Board by Dr. Bridgeland. Steps were immediately taken to disinfect the house where the patient was, and a notice in accordance with the by-law was posted upon the house and remained there until the patient was convalescent.

The Inspector reported a number of cases of unsanitary condition of premises, chiefly water-closets and manure heaps, but in every instance the parties complied with the law upon being notified so to do.

A second case of typhoid fever is mentioned in the Medical Health Officer's report, but it was not brought to the notice of the Board.

It is a matter for congratulation that so very few cases of infectious disease have occurred, and that the general health of the municipality has been so good during the past seven months ; a state of things which, under God, I believe is largely due to the exertion of the Board and its officers, especially when it is considered that the influx of several hundreds of the labouring class, and the overcrowding of many of the houses, is likely to promote or aggravate disease.

I desire to call the attention of the Council, and especially the incoming members of the Council next year, to several suggestions contained in the Medical Health Officer's report,

and also to the legislative and increased powers of Municipal Councils passed since the Public Health Act, and would recommend the Council of 1885, in view of the possibility of cholera invading the Province next spring, and the number of cases of small-pox at present existing in the Province, and the number of strangers in our midst employed upon the railway now in course of construction, to rigidly enforce the provisions of the Public Health Act, and the by-laws of the municipality in regard to the public health ; and I trust that during the coming year the inhabitants of the municipality will do all in their power to assist the Board of Health in enforcing the Public Health Act, and will be blessed with as good health and freedom from infectious disease as they have been during the past year.

ALFRED HUNT,
Chairman.

HALTON.

Burlington Village.

MEDICAL HEALTH OFFICER'S REPORT.

The village has been exceptionally healthy this summer, and I think that is partly owing to the sanitary measures that have been taken. The inspector has seen that all manure has been removed from the stables from time to time, as it accumulated ; also all the pig styes regularly cleaned and kept at a distance from the house, as prescribed by the Act ; also he has had the privies cleaned out and chloride of lime freely used, and several other minor nuisances removed, as I directed. There have been two cases of Typhoid Fever, one of Measles ; no malarious fevers, and the Typhoid cases were imported. There have only been four deaths registered here, two from senile decay, one from consumption, and one an infant, cause unknown. There has been lately a change in the clerks, and things are not quite settled.

A. CARTER, M.D.

ONTARIO.

Cunnington Village.

CHAIRMAN AND SECRETARY'S REPORT.

The Local Board of Health of the Village of Cannington beg to report that they have been organized as a Board of Health since the month of June of the present year ; that they have appointed a Sanitary Inspector ; that the Chairman of the Board being a Medical gentleman, they considered that it would be sufficient for him to take the oversight, without appointing a Medical Health Officer.

As soon as organized they at once had notices printed instructing the inhabitants of the village to have their outbuildings, water closets, cellars, yards, and premises cleaned from all refuse or noxious matter, by burning or burying the same, and to have all privies and water closets properly deodorized or disinfected.

That the Sanitary Inspector has very efficiently seen that the foregoing instructions were complied with, and now reports that the village is in a very satisfactory condition, as far as the carrying out of the provisions of *The Public Health Act* is concerned.

The Board has also to report that they have been ably sustained by the Municipal Council of the village, in their efforts to enforce the provisions of *The Public Health Act* in this municipality.

D. GILLESPIE, M.D., Chairman.
GEORGE HORNE, Secretary.

HALDIMAND.

Cayuga Village.

CHAIRMAN'S REPORT.

The Board of Health of the Village of Cayuga, beg to report as follows :—

The Board was organized on the 10th day of May by the appointment of a Chairman and Medical Health Officer, and arranged for an inspection of such places as it was thought required attention. The Board met again on the 5th day of July, and proceeded to inspect the public and high school premises, giving directions for the removal of refuse in the basement of the high school, and for the disinfection of the closets.

The high and rolling land on which the village is built affords excellent natural drainage, but on a few streets surface water was found, and directions were given for immediate attention thereto.

Water for domestic use is chiefly supplied from wells and cisterns, but the isolated position of most of the buildings renders it safe from pollution through drainage. A few dry earth closets are already in use in the municipality, and it is recommended that steps be taken to make their use general.

There has not been a case of infectious or contagious disease in the municipality during the past season, and the usual malarial affections which prevail along the valley of the Grand River during the summer season have been but few, and of a very mild form.

J. BAXTER,
Chairman.

HURON.

Clinton Village.

SECRETARY'S REPORT.

The drainage of the town is effected by open drains, and they are with difficulty kept clean. The Board have not had funds placed at their command to do what they have thought best to be done. The Council have been applied to with reference to one of these drains, specially polluted with sewage, and which the Board consider a very great nuisance, but the Council have failed to do anything in the matter. A Sanitary Inspector was appointed and a thorough inspection was made by him. No Medical Health Officer.

J. CALLANDER,
Secretary.

HALDIMAND.

Dunville Village.

CHAIRMAN AND SECRETARY'S REPORT.

The Board immediately after being appointed met and organized by appointing James Scholfield, sen., as Chairman, and J. W. Holmes as Secretary, and after mature deliberation resolved upon a house to house visitation. This conclusion was arrived at because of no Medical Health Officer or Sanitary Inspector being appointed, and it was thought a consultation by the full Board of each case requiring attention would be preferable. The objects which have engaged the attention of the Board have been the general sanitary condition of the village, which, upon our first visit, was found to be in a very neglected condition. We found the greatest trouble to arise from a want of system in the deposit of vegetable and other refuse, in nearly every case it being thrown in the back yards, there to decay. As a remedy in this case we recommended all such to be removed at once, and in most cases the people did readily comply. Surface wells and wood cisterns

being the chief water supply, we found privy vaults a very difficult matter to contend with. In most cases holes are dug and lined with inch boards or plank, and of course not being water-tight the ground was saturated with the liquid, which, from the sandy nature of the soil, has no difficulty in draining into and contaminating the wells or cisterns. There has not been any definite method adopted to remedy this evil, and the Board feels that unless earth closets, such as are recommended by the *Sanitary Journal*, be adopted, this evil will continue; but to enforce this is a very difficult and will be an expensive undertaking. The Board, as a temporary relief, insisted upon all vaults being thoroughly disinfected about every two weeks, and they had to make frequent visits in order to enforce this. There being no village by-law in reference to privy vaults, the people were taken by surprise, and in some cases very reluctantly complied with the order of the Board. This section has not been visited with any serious illness except Scarlet Fever, and of this we have had fourteen cases and three deaths reported; however, to what extent the disease can be traced to polluted wells we are unable to say, but firmly believe the disease has been fed by contamination with foul drinking water. We supplied each doctor in our district with slips to report disease such as is enumerated in your list, and gave strict instructions to watch and require each person who has any cause to enter the sick chamber to use disinfectants before going out, and to prevent, as much as possible, any person going into public. We also posted notices, as recommended by you, upon receiving information from the doctors of any disease; we also notified the principals of the high and public schools, so they could prevent any child from going to school who was likely to be near such disease. The precautions taken this year have no doubt been very beneficial in at least reducing Fevers and Diphtheria, as the number of cases reported this year is considerably less than last report, but we feel that even greater vigilance is absolutely necessary in view of the probable visitation of Cholera next year; and from the slight fall for drainage in this village there must be a careful supervision of all precautions which can be applied to the proper cleaning of all foul matter which would likely contaminate the drinking or other water for family use.

JAS. SCHOLFIELD, Chairman.
J. W. HOLMES, Secretary.

OXFORD.

Embro Village.

SECRETARY'S REPORT.

Our municipality is in an extremely good sanitary condition. The Board of Health, including a M. D., carefully inspected all premises, and caused every nuisance likely to endanger the public health to be removed or destroyed. We opened a book of complaints; when any person knew of any nuisance it was recorded, and said nuisance immediately attended to by the Board.

E. OODY,
Secretary.

HURON.

Village of Exeter.

MEDICAL HEALTH OFFICER'S REPORT.

I beg leave to enclose my first report which is very imperfect, having a great many difficulties to contend with in introducing a new system in this place.

About the first week in August a Health Board was organized in the Village of Exeter, and a Medical Health Officer appointed, who was also chosen Chairman of the Board.

A few days after organization an inspection was made by the Board in a body, who inspected the hotels and livery stables, as also the school house, where everything was found in a satisfactory condition with the exception of the pig pens, which were clean but not placed at the proper distances from dwelling houses. The hotel-keepers at once disposed of their pigs, thus getting rid of this nuisance.

The next matter to engage the attention of the Board was the filthy condition of the privies, and in a great many cases their too close proximity to wells, not being more than thirty or fifty feet away. This matter has been pretty well attended to, and we hope to make a great improvement in it next year. Three cases of typhoid fever, one of diphtheria and five cases of whooping cough, have been reported. More cases of whooping cough were in the town, but did not receive any medical treatment. A creek runs through the south end of the village, which is fed about six months of the year from a swamp about half a mile out of the town; this creek in the dry months of summer is a receptacle for filth and stagnant water, and measures are to be taken to remedy this next year.

I would state in conclusion that the Board met with a good deal of opposition in carrying out any sanitary measures.

JOHN H. HYNDMAN,
Medical Health Officer.

MIDDLESEX.

Glencoe Village.

SECRETARY'S REPORT.

The work required to be done by our Local Board of Health during the past year has been so trifling that their report must necessarily be brief. During the entire year there has not been a single complaint from any source laid before us—and the only work done at the instigation of the Board, was the construction of a short sewer through the back yards of a few premises, where stagnant water was found in wet seasons. Our village has not suffered from any malarial or contagious diseases this year, but, on the contrary, has been remarkably healthy. I might say that our Municipal Council has exercised considerable care and vigilance in keeping the streets, and lanes clean and promptly suppressing any business about to be carried on which might endanger the health of our citizens.

GEO. M. HARRISON,
Secretary.

LINCOLN.

Grimsby Village.

CHAIRMAN'S REPORT.

In accordance with sub-section 3, "Schedule A" of the "Public Health Act, 1884," I beg leave to report as follows:

At the first regular meeting of the Board held in June, various matters pertaining to public health were discussed, and certain measures were adopted, in order to carry out as far as possible the spirit of the law in regard to sanitary reform; among which were the printing of certain sections of the Health Act in pamphlet form, for distribution among the people, so that they might not be able to advance the plea of "ignorance of the law" as an excuse for "breaking the law."

At the next meeting held July 31st, a resolution was adopted recommending Mr. John Duval, Senior, for appointment as Sanitary Inspector, the Council up to this time not having appointed one. It was also decided to purchase 100 copies of the pamphlet "On the Disposal of Sewage," issued at a cheap rate by the Provincial Board. These were subsequently sent to those citizens who would be most likely to read them, with the

hope that the influenced citizens might be induced to co-operate with the Board in their endeavour to popularize the subject of Public Hygiene, and also to assist by *example*, which is known to be more powerful than precept.

The Sanitary Inspector, owing to severe illness shortly after appointment, was able only to make a partial inspection of the village.

Upon the whole, I believe, considering the difficulties met with in carrying out the radical changes proposed by the new Act, that the Board have accomplished considerable good during the short period they have been in office.

The "Dry Earth System" has been adopted by many who formerly used "pits" in disposal of excreta. Where "pits" are still used, they have been removed to greater distances from wells and dwelling houses, old pits emptied, and filled up with clean earth.

Fortunately, we have not been visited by any contagious epidemic during the past six months. Had we been, the Board was prepared to enforce isolation of the sick, and other regulations necessary for the protection of the well.

R. A. ALEXANDER,
Chairman.

WELLINGTON.

Harriston Village.

MEDICAL HEALTH OFFICER'S REPORT.

A meeting of our Local Board was held 4th December, and on the 5th the Chairman reported to the Council as follows:

"The Local Board of Health beg to report that in compliance with the statutes in that behalf, soon after the formation of the Board, the Sanitary Inspector caused notices to be posted up, notifying all owners and occupiers of houses and premises to have their yards and outside houses properly cleansed; and subsequently made a personal inspection of several places likely to engender disease, and caused the same to be cleaned. Since then, he has visited some places where typhoid fever was said to exist, and found some cases of fever, but as each case was in a favourable way towards recovery; he did not consider official interference necessary."

On the 6th December, inst., I received a communication from the Medical Health Inspector, of which the following is a copy:

"In compliance with the Act requiring me to make an annual report to the Board I submit the following:—During the past year there have been no reports; as directed by the 49 section of the Public Health Act of 1884, from the resident medical men of the prevalence of any contagious or infectious disease within the municipality, with one exception, and that was a case of typhoid fever, which, owing to the precautions taken, was confined to the house in which it appeared; and as there have been no complaints of existing conditions that are likely to be productive of disease, I can have no hesitation in congratulating the Board upon the general good health and excellent sanitary arrangements that exist.

"W. A. HARVEY, M. D.,
"Medical Health Officer."

SECRETARY'S REPORT.

The sanitary and health conditions of the village are favourable, which in a large measure accounts for what might be considered laxity of the Board, and the absence of reports in more strict conformity with the legal requirements.

I feel justified in predicting that with the commencement of duties of the next municipal year; more active application will be devoted to these matters by the incoming corporation representatives.

M. P. EMPEY,
Secretary.

 PRESCOTT AND RUSSELL.
Hawkesbury Village.

SECRETARY'S REPORT.

A Local Board of Health has lately been organized for this village, and has a Medical Health Officer.

I have to report that the privies are in a number of cases too close to wells, but, so far as I know, no disease has been traced to this condition. There have been several cases, both of Scarlet and Typhoid Fever during the year, and in these, as in all cases of infectious disease, disinfectants have been used. There are no slaughter-houses in our village.

A. J. PARKER,
Secretary.

 NORTHUMBERLAND AND DURHAM.
Hastings Village.

SECRETARY'S REPORT.

The Board met on June 25th and 28th, and July 7th and 18th.

The business transacted was first to make a general tour of inspection regarding drainage, and any other business connected with the general sanitary state of the village.

Drainage and other work was started and inspected by the Board at the other meetings of June 28th and July 7th and 18th, when good work was done, and our village has been and is now in a good sanitary state.

The Inspector has reported to me that he has during the season made fifteen official visits in different places in this municipality, and states that the village is in a clean and very healthy condition.

JOHN SHARPE,
Secretary.

 ESSEX.
Kingsville Village.

MEDICAL HEALTH OFFICER'S REPORT.

In submitting my report, I feel that it is unnecessary to apologize for its brevity, but rather consider it a matter for congratulation that the sanitary condition of the village has been such as to render a lengthy report uncalled for. During the past year there have been no cases of any disease of a contagious or epidemic nature. This fact appears the more singular and noticeable when we are reminded that in various localities within a radius of not more than ten miles zymotic and malarial diseases have been prevalent, the death-rate from which has been large.

The causes of our immunity from these afflictions, in my opinion, are not far to seek. Undoubtedly the primary reasons for the healthfulness of the place, are—1st, the excellent natural drainage; 2nd, the porosity of the soil; 3rd, from the situation of the village, an elevated ground with the lake to the south, the prevailing wind being south, the air is of necessity pure and untainted with malarial or other noxious impurities. Now, while we may contemplate with satisfaction these natural advantages of our village, it is none the less important that the Board should be vigilant in the observance of those precautions which, if neglected, might nullify them. Perhaps the first in importance of

those precautions is the prevention of the pollution of the soil in the neighbourhood of the water supply; because, whereas the porous nature of the soil is a benefit as an aid to drainage, yet, that very porosity facilitates the contamination of wells from contagious privy-vaults or other sources of impurities.

Considering the fact that this is the first year of organization of the Board, I have to commend the Board and Inspector upon the degree of efficiency exhibited in the performance of their duties, yet there are some matters of considerable importance yet unattended to.

S. A. KING, M.D.,
Medical Health Officer.

LANARK.

Lanark Village.

CHAIRMAN'S REPORT.

The Local Board of Health for the Village of Lanark, in submitting this their first annual report, have much pleasure in being able to state: That there has not been during the past year any case of Smallpox, Scarlet Fever, Measles, Diphtheria, Whooping-cough, or Typhoid fever—a fact which, in the opinion of this Board, is evidence of the good sanitary condition of this village, and obviates the necessity of making such an extended report as would have been found necessary had any of the diseases above mentioned prevailed even to a moderate extent.

T. B. CALDWELL,
Chairman.

MIDDLESEX.

London West Village.

CHAIRMAN'S REPORT.

I have the honour to present herewith the first annual report of the Board of Health of this village, including the report of the Medical Health Officer and Inspector. The year being so far advanced when the Board was appointed, and especially as regards the appointment of Medical Health Officer and Sanitary Inspector, this report will consequently be brief and somewhat incomplete, especially as their attention has been mainly taken up in the hearing of evidence with reference to the great public nuisances caused by the Blackfriars and water works' dams, the said nuisances having been complained of in two petitions presented to the Board by the ratepayers of this municipality, praying for the abatement of the same. With reference to the first-named dam, the Board, after hearing the evidence presented to them, were satisfied that a nuisance did exist, and notified the owner of the same to abate the said nuisance in a given time, which, not being done, the evidence as taken was forwarded to the Provincial Board, and no doubt will be dealt with at an early date.

In the matter of the nuisance complained of, caused by the water works' dam, your Board, having heard the evidence submitted to them, consider a nuisance does exist, and have ordered that the Board of Water Commissioners be notified to abate the same within one month from date of notice.

Your Medical Health Officer reports that he has visited the schools, and that he found the same in a good sanitary condition; also, that the village generally was in a clean and good sanitary state, with the exception of the river, which he considered was in a bad state, but owing to the short time that he had been appointed, he had not sufficient data to found a report on.

Your Sanitary Inspector reports having visited 47 premises, out of which he found people using water from 13 wells that was not fit for use, some of which had not been cleaned out since the flood of 1883 ; the owners of said wells, after being notified by him, in each case had them cleaned out, making them fit for use.

Your Board would earnestly urge upon you that steps be taken to have the village placed in a good sanitary condition, by doing all in your power to have the obstructions in the river removed, so that the filth may have a chance to be washed away.

R. F. LACEY,
Chairman.

YORK COUNTY.

Markham Village.

MEDICAL HEALTH OFFICER'S REPORT.

I am pleased to report the great improvement in the sanitary condition of the municipality, due to the prompt and energetic action of your body when any violation of the By-law was brought under your notice, thereby causing its immediate removal or suppression, and to the co-operation of the public in endeavouring to carry out its provisions. Particularly is this improvement noticeable in my own immediate neighbourhood, where formerly the effluvia arising from the slaughter-house and offal-fed pigs were extremely sickening ; but, thanks to your action and persistent interference, this has been reduced to a minimum, and in many other places it is also self-evident.

The one remaining nuisance exists in the shape of privy-pits. The existence of such a number (many of them never being cleaned, but when full covered over with earth and the closet placed over a fresh one), cannot but be injurious to the health of the public, situated as they are in such close proximity to our wells and dwellings ; and I would strongly urge upon you the advisability of making the adoption, in the near future, of dry-earth closets 'compulsory, as is now done in several municipalities. The dry-earth system involves but a slight additional expense to each freeholder, with very little increased trouble to each householder, when compared with the incalculable benefits derived from it.

Trusting this will receive your serious consideration,

W. ROBINSON,
Medical Health Officer.

SECRETARY'S REPORT.

The Local Board of Health for the Village of Markham, in the County of York, beg to present their report for 1884.

The Board held its first meeting on the 26th day of May, 1884, at which H. R. Wales was duly elected Chairman.

On motion, the Sanitary Inspector was instructed to make a thorough examination, as required by by-law, of the entire village, of all premises, etc., therein.

On the 27th day of June the Board met to receive the reports of the Health Officers and Inspector.

The Sanitary Inspector reported that he had made a thorough inspection, as required by by-law. On his first visit there was much to complain of. He gave all parties notice to put their places in such order as was required by law. The second inspection he made the week following, and was pleased to report that, with few exceptions, the householders had conformed to his instructions. On his third inspection, there were only some seven places left in an unsanitary condition. The cellar of Dr. Smith was half filled

with water ; the back premises of Roundtree, butcher ; Mair's Hotel, stable and yards. Ditch in front of A. Mair's law office wanted opening. The old house belonging to D. A. Milne (unoccupied) was simply a pest house, and required immediate renovation ; also, the slaughter-house and premises of P. Glen, butcher.

Dr. Robinson, Health Officer, also reported, recommending dry earth closets ; also, that vaults, cess-pools and drains remaining uncleared be cleaned and deodorized by the use of sifted ashes, etc.

The third meeting of the Board was held on the 1st day of August, 1884. Members all present.

The Inspector reported having made three inspections and found the village in a satisfactory sanitary condition, with the following exceptions : Dr. Tefft and Dr. Smith's cellars were still undrained. Being rented property, the owners refused or neglected to put in drains, and the filthy state of the following premises : Blakely's hog-pen, Jerman street ; J. Quinn's hog-pen, Jerman street ; P. Glen's hog-pen and slaughter-house, Main street, and Commercial Hotel stables. The Board, as a body, inspected the above-named premises, and, on motion, instructed the Inspector to notify the parties to remove all nuisances within five days, and to lay information at once and prosecute P. Glen for keeping his premises in so filthy a condition. Board adjourned to meet on call of Chairman.

The fourth meeting was held in Town Hall, on August 28th. Members all present, Chairman presiding. Minutes of previous meeting read and confirmed.

Reports from Health Officer, recommending the removal of pig-styes from the premises of Blakely and Quinn, being injurious to public health ; also, from Sanitary Inspector, reporting that the said parties, in addition to J. White and T. Woolten, refuse to comply with by-law.

The Board again made a personal inspection of premises complained of, and, on motion, ordered the Inspector to give notice to the parties to remove the nuisances within two days, they failing to do so to prosecute at once. Board adjourned.

The fifth meeting of the Board was held in the office of C. E. Fenton, Sanitary Inspector, on Nov. 29th, 1884.

Reports from Health Officer and Sanitary Inspector, which find herewith attached.

Mr. Vanzant moved, seconded by Mr. Fleury, that the reports of the Health Officer and Sanitary Inspector be received and adopted. Carried.

Mr. Vanzant moved, seconded by Mr. Fleury, that the Sanitary Inspector be paid twenty-five dollars for services for 1884. Carried.

On motion the Board adjourned *sine die*.

We may add that in every case the parties complained of complied with the instructions of the Board, hence there were no prosecutions, excepting in the case of P. Glen. Prosecution was commenced in that case, but he, on receipt of summons, immediately removed the nuisance and prosecution ceased.

There were no cases of Diphtheria, Small-pox, Malignant Fevers, during the season, so far as known to the Board.

I herewith send report of Health Officer and Sanitary Inspector.

H. R. CORSON,
Secretary.

SANITARY INSPECTOR'S REPORT.

It is with pleasure that I have to report to you that the village is at the present time in a good healthy condition. There have not been any complaints for the last month, and all the wells, cisterns and privies that were in a filthy state I believe are cleaned.

Disease has not been so prevalent as last year. In looking over other reports, I find that Markham has been favoured with the best of health in comparison to other villages. There have been only a few cases of Dysentery and Diarrhœa.

C. E. FENTON,
Sanitary Inspector.

STORMONT, DUNDAS AND GLENGARRY.

Morrisburg Village.

SECRETARY'S REPORT.

The health of this village is good, and the Local Board of Health fortunately was not called on to go to much trouble, other than having an inspection carried out which, on the whole, was satisfactory.

JOHN FETTERLY,
Secretary.

LEEDS AND GRENVILLE.

Newboro' Village.

SECRETARY'S REPORT.

The Local Board of Health have directed their attention to the disposal of a pit containing carcasses of dead animals, and in notifying the owner of a slaughter-house not to slaughter any animal in this municipality without the assent of the Local Board of Health. The Board have not appointed a Medical Health Officer. There have been 15 cases of Scarlet Fever, 46 of Diphtheria, and two of Typhoid Fever in the village during the year ; but there are no precautions taken in regard to isolation, disinfection, etc., etc., nor do I know to what extent diseases might be reduced if those precautions were complied with.

E. R. WITHERIL,
Secretary.

NORTHUMBERLAND AND DURHAM.

Newcastle Village.

SECRETARY'S REPORT.

The officers of the Local Board of Health of this village did, in the month of August last, make a general inspection of the municipality, and in all cases when premises were not found in a sanitary condition, the officers ordered the cleansing of the same, which orders were cordially complied with. The health of the village is good at present.

GEORGE CURTIS,
Secretary.

CARLETON.

New Edinburgh Village.

SECRETARY'S REPORT.

I laid your communication before the Board of Health.

I am requested to state that in 1883, we engaged a Health Inspector to make a house to house visit. He was re-engaged in the spring of this year to do his best to look into the inner recesses of hidden filth, and as he is an "outsider" in official costume, we have every reason to believe he did his work well. We paid him \$50, and he is paid extra if any neighbour reports the existence of a nuisance. We spent \$6,000

last year in drainage, and this is now supposed to be the best drained village in the Province.

The Board had no report to make, but authorized me to state what had been done, and that every precaution is being taken to keep the surroundings as cleanly as possible.

T. TUBMAN,
Secretary.

WATERLOO.

Village of New Hamburg.

MEDICAL HEALTH OFFICER'S REPORT.

As Medical Health Officer, under and in accordance with *The Public Health Act of 1884*, I beg leave to Report as follows: That the Health Inspector has carefully inspected all premises in the corporation, and from personal consultation am pleased to report that he finds a marked improvement in cleanliness, and a spirit of improvement among the inhabitants when compared with past years. Still we are far from being perfect, and looking over his report I find many exceptions to privies, cellars, cesspools, and pig-sties, etc. He assures me, and I find from personal inspection and enquiries that even here where they have been pointed out, in most cases things have improved. So that as we proceed in future years with a stringent law and careful inspection, much disease and indisposition will be avoided. We have every reason in our village to be exact in carrying out the law. Situated on a peninsula almost surrounded by the river, we will always be under the influence of stagnant water, through the effluvia arising therefrom; added to this the fact that most of the wells are only from 12 to 25 feet in depth, and in many cases, if not all, very likely fed from the river, renders a thorough inspection of not only all general nuisances already mentioned, but especially of the wells in the place, as no doubt much of the endemic diseases are transmitted through the water we drink. In these cases we have recommended not only cleaning out the wells once or twice a year, but in addition to be pumped out once or twice a month at least, and during the heated term the water be boiled for drinking purposes. Tests of the well-water have been made by me, taken from various water of the village, and found generally unsatisfactory, rendering the above precaution very necessary.

Upon the whole the village during the past year has been very healthy, with a type of Malarial Fever with Typhoid symptoms in some cases, which has been prevalent during the past five months, but is now gradually disappearing. All of this could be ascribed to the stagnant river and impure well-water.

I think the programme of inspection, as issued by printed form here used, has been well carried out, and much praise is due to the Inspector for his thoroughness in what must always be a rather unpleasant job.

G. SCHMIDT,
Medical Health Officer.

WELLAND.

Niagara Falls Village.

CHAIRMAN'S REPORT.

I have been instructed by the Local Board of Health for this municipality to send you the following as the Report for 1884:—

A good work has been done here in improving the sanitary condition of the village. Under instructions of the Board the Sanitary Inspector has made a thorough inspection of nearly all the premises on every street, and in some cases he has made a second visit,

to see that proper cleaning up and disinfecting had been done according to requirement. All slaughter-houses have been moved to a proper distance from the village, and all other nuisances, so far as known, have been removed, so that the village is now in a fairly sanitary condition. I enclose herewith the Medical Health Officer's Report, as required by sec. 1 of Schedule A of *The Public Health Act of 1884*.

JOHN A. ORCHARD,
Chairman.

MEDICAL HEALTH OFFICER'S REPORT.

I have the honour to report that during the past year the health of this municipality has been excellent. With the exception of a few cases of Diphtheria, of a mild type, we have been entirely free from contagious or Zymotic diseases.

JAMES McGARRY, M.D.,
Medical Health Officer.

YORK.

Parkdale Village.

SECRETARY'S REPORT.

I have the honour to present herewith the second Annual Report of the Local Board of Health.

During the past year there have been reported to the Board but few cases of contagious diseases, and their prompt isolation has rendered the risk of spreading comparatively light—Typhoid fever especially has been much below the average, and in the greater proportion of the cases that have occurred, the disease has been traceable to sources lying outside of the municipality.

Of all matters pertaining to sanitary reform, as affecting the general health, that of drainage is of paramount importance. The fact of building a sewer along the street is not all that is comprised in the term drainage; but the connection of all houses on such a street with the sewer is necessary to complete the term in its fullest sense, and should that not be done, then the good effected by the municipal authorities is but half done, when it lacks the appreciation of the owners of household property, and the Board would respectfully recommend the Council to take such steps as may be necessary to compel the owners of property to connect with the sewers wherever they exist.

With reference to the exhalations from defective traps along the line of sewerage already constructed, the Board would recommend that an inspection be made at stated periods, say monthly, and that the Inspector be required to submit a report thereon to the Council.

With reference to the flushing of the sewers, although they have been flushed four times during the year, yet in the opinion of this Board, that is insufficient; and that this important matter should be also attended to at stated periods of every two months at least, or oftener if necessary, and that the Inspector be required to report thereon to the Council.

Another matter of importance is,—the bestowal of garbage. Hitherto the garbage collected by the scavenger has been placed upon low-lying lots, and as this is but causing an accumulation of decomposing matter, and so aggravating a nuisance instead of remedying it, and cannot but be prejudicial to the general health of the municipality, the Board would therefore most strongly urge upon the Council the adoption of the advice tendered by Dr. Covernton, of the Provincial Board of Health, upon this subject, namely, that it be disposed of by fire. A furnace suitable for the purpose could be built for a trifling outlay, when the great general benefit to be derived therefrom is considered.

In regard to the system of dry-earth closets, as recommended by the Provincial Board of Health, it has been adopted in numerous cases, but the cleaning out and disinfecting process has not been attended to with the punctuality necessary to health—indeed, the Medical Health Officer, Dr. Rowe, in his Report, states, “That he has no hesitation in saying that to such a source may be attributed numerous cases of sickness.” The Board would therefore urge the necessity of enforcing the law in this important matter. In connection with this subject, the Board, this year, instituted a system of house to house visitation, for the purpose of remedying this very defect ; but owing to the numerous duties of the Inspector in his dual position of Inspector of Works and Sanitary Inspector, he has been unable to systematically encompass the whole village—quite a large portion remaining unvisited. If the Council do not deem it expedient at present to appoint an Inspector whose whole time shall be devoted to the duties of such office, then the present Board would most strongly urge upon the new Board of Health for the year 1885, the urgent necessity of such an appointment being made.

From the manner in which the property-holders in many instances have thrown out their garbage and refuse on to the public lanes of the village, and causing thereby much loss of time to the scavenger and his team, the Board would also suggest that, if possible, for the next year, one of the street labourers should be detailed the day previous to the visit of the scavenger, to gather together all such scattered refuse in order that it may be more readily removed.

HENRY S. LANGTON,
Secretary.

MIDDLESEX.

Parkhill.

SANITARY INSPECTOR'S REPORT.

We have a Local Board actively engaged in matters relating to the public health ; general cleanliness has engaged its attention the last year. Pits are the usual method of disposing of excreta ; thirty-five of those said to be cleaned this year, forty-five not. No by-law regarding such pits until this year. Many of them are not over from twenty to sixty feet from the wells. No cases of diseases have been traced to their presence ; where new ones are being built, dry earth closets have been recommended. Slop-water is mostly thrown on the earth ; refuse of vegetables, etc., where no pigs or fowls are kept, is often thrown in back yards. Water supply, from wells from ten to twenty feet, which must contain surface water, as the soil is clay, and as two wells are often found on one-fifth of an acre, they must be more or less affected by the excreta and other refuse ; only half of them contain water fit to drink. No nuisances, such as neglected slaughter-houses, etc., allowed inside the limits of the corporation. In our inspection we found some places that must in a few years become badly diseased ; for instance, where two families live on one-fifth of an acre and have two wells and two cess-pits, which, when the latter overflow, the building is changed to another place on this narrow space of land. We would strongly recommend the dry-earth system. Even when the wells are bricked up, filth is always accumulating in the porous part of the brick. In only one instance did we find an excess of number in a tenant house, and then we found a family of nine, occupying two rooms 10 x 12. The most of the cellars are boarded up, and in a state of decay, but generally kept clean from vegetable matter. We would recommend that all Boards of Health have rules and regulations printed in pamphlet form, and furnished to the Sanitary Inspector to be handed to every householder, keeper of hotel, livery, or slaughter-house, so that they might know what was expected of them and be made to perform the necessary cleansing duties, for not one in a thousand have the least idea of the liabilities under which they are laid.

E. G. CHAMBERLAIN,
Sanitary Inspector.

WELLAND.

Port Colborne.

SECRETARY'S REPORT.

I beg leave to submit the following annual report of the sanitary work done during the year, and of the sanitary condition of the village :

Number of cesspools filled up and cleansed	1
Number of pig-pens cleansed and deodorized	6
Number of privies, soil removed, deodorized, etc.	15
Number of manure piles removed	4
Number of permissions in writing to milk vendors	2
Number of permissions to slaughter	1
Number of bakeries examined and found in good condition, clean, etc..	1

The present sanitary condition of the village is good, but when I, as Inspector, will have completed my rounds of inspection I expect that the condition generally will be better. I have met with no opposition as yet in the performance of my duty, but on the contrary all seem to act at once on notice being given.

S. J. HOPKINS,
Secretary and Inspector L. B. H.

LINCOLN.

Port Dalhousie Village.

MEDICAL HEALTH OFFICER'S REPORT.

As Medical Health Officer and Sanitary Inspector, I beg leave to submit the following report for year 1884. In unison with Chairman of your Board and the Reeve of the Municipality, we made in the early part of the spring a thorough inspection from house to house, and found things in a very satisfactory condition. With a desire on the part of the inhabitants to use every means suggested to them to carry out every precaution towards counteracting the poisonous effect of Malaria, sulphate of iron was procured and used freely as a disinfectant. I also procured vaccine virus and vaccinated successfully 185 children, thereby protecting the inhabitants from the ravages of Small-pox, which may at any time appear, and is now committing sad ravages in other parts of our country. I would say, gentlemen, that we have been blessed with a freedom from almost all malarial or contagious diseases ; the only cases of a malarial nature were a few isolated of ague. I would respectfully advise upon your Board the urgent necessity of requesting the Council of this municipality to carry out the by-law prohibiting all persons from keeping slaughter-houses within the limits of the municipality, and also that hog-pens must be a certain limit from dwelling-houses, as the Provincial Board of Health directs. Those views meeting your approval, we may, with the help of divine Providence, be enabled to ward off contagion during the coming year.

JOHN WYSE CONSIDINE, M.D.

FRONTENAC.

Portsmouth Village.

CHAIRMAN AND SECRETARY'S REPORT.

We have the honour to report as follows : That the first meeting of the Board of Health of this village for 1884 was held on the 16th day of June last, at 12 o'clock noon. After the Board being duly organized, the Secretary was directed to prepare and post up

printed notices directing owners and occupants of premises to have their yards, cellars, out-buildings, privy-vaults, pits, etc., cleansed from all filth, dirt, nuisance, etc., before the first day of July, 1884 ; also that all wells, from which drinking water is used, be cleaned out by the same date.

Henry Knight (village constable) was appointed Sanitary Inspector, and ordered to make a general inspection of the village not later than the 15th day of July, and also that he make a written report of the same to the Chairman of the Board.

The second meeting of the Board was held on the 16th September—all members being present. With reference to the report of the Sanitary Inspector, which was presented and read, it was

Resolved : That the portion of the report relating to privies be adopted, and that he be instructed to notify persons whose privies are in an unsanitary condition, or discharge into open drains, or creeks or drains leading into creek, to be cleansed, or when required to be removed and reconstructed within ten days, and in the event of default the Sanitary Inspector be authorized to lay information against them, and compel compliance, as specified by the Act. That so far as the report on wells and water supply is concerned, the Inspector shall, as far as possible, see that the wells are properly cleaned and purified.

It was also recommended that the reconstruction of all water-closets be made as set forth in the pamphlet of the Provincial Board.

The attention of the Corporation was directed to the cleaning of the public well.

Pursuant to the call of the Chairman, the third meeting of the Board took place on the 16th October. The Board having, as a body, made a personal examination of the village creek and drains, also sundry water-closets, wells, etc., it was

Resolved : That the attention of the Council of Portsmouth be directed to the main village drain, and the creek running into it, with a view, if possible, of cleaning out the same and flushing it.

It was unanimously resolved that Dr. John H. Betts be appointed temporary Medical Health Officer. The Doctor being present stated that several mild cases of Diphtheria had made their appearance in the village, notably one case which proved fatal.

It was resolved that the Boards of Trustees of the Public and Separate Schools be requested to close the schools under their respective supervision for a period of one week from date, in view of the general state of sickness in the village ; and that the teachers be instructed to point out to the children the danger of mixing with the families of those affected.

The above is a brief epitome of the business of the Board for the present year.

We are happy to state that the above-named epidemic has apparently subsided, four deaths having occurred in a total of about eighteen cases, as far as we are able to learn. We trust it will have the effect of stirring up the people to a more personal and lively interest in the preservation of the public health.

It is to be regretted that the Council of this village has been so apathetic and inactive for several years past, thus placing an extra burden on the labours of the present year, the results of which have not been so satisfactory as were anticipated ; but it is earnestly hoped that the successors of the present Board will follow up the work already begun, with that energy and vigilance which the necessity and responsibility of the matter demand.

JAMES ADAMS, Chairman.
THOS. KELLY, Secretary.

—
YORK.

Richmond Hill Village.

SECRETARY'S REPORT.

At a meeting of the Local Board of Health of this village on the 19th November instant, the following resolution was passed, viz. :—

Moved by Mr. Brown, seconded by Mr. Falconbridge : That the Secretary is hereby instructed to report to the Provincial Board of Health that in the opinion of this Board, the sanitary state of the Village of Richmond Hill is in a reasonably satisfactory state at present, and that this Board will use its best endeavour to carry out the law relating to the public health, as circumstances may require.

M. TEEFY,
Secretary.

Stouffville Village.

CHAIRMAN'S REPORT.

As Chairman of the Board of Health, I beg to submit the following report :—

Since the 1st of May last (the time of our organization) we have held six monthly meetings ; during that time there have been two thorough inspections of the village made, special attention being given to stagnant water, slaughter-houses, cesspools, and foul wells and cellars. Our Medical Health Officer (Dr. I. A. Frecl) and our Inspector (James O'Brien) have both attended to their respective duties in a manner satisfactory to the Board. Particular attention has been paid to the condition of privy-vaults, yet there remains room for still further improvement in that direction.

Our village has been comparatively free from contagious diseases during the past six months. One case of Typhoid has been reported, but by the use of disinfectants and other necessary precautions the further spread of the disease was prevented.

I believe we have great reason to congratulate ourselves on the healthy condition of our village in general, and we shall no doubt in the future derive quite as much benefit from the precautions taken as we have done during this summer.

JAMES DOUGHERTY,
Chairman.

PEEL.

Village of Streetsville.

SECRETARY'S REPORT.

I have the honour to transmit to you the following report of the sanitary work done during the year, and of the sanitary condition of this municipality :—

The Local Board of Health was organized on Monday, the 19th day of May, when the first meeting of the Board was held, and Mr. William Taylor was appointed Chairman. Eight meetings of the Board have been held altogether. The object of the business done by the Board has been to cause to be made from time to time inspection of the municipality as needed, in order to force the removal of any unsanitary condition, or the abatement of any nuisance prejudicial to public health that might be found to exist in the municipality.

No Medical Health Officer has been appointed ; but, on the recommendation of the Local Board, the Municipal Council appointed a Sanitary Inspector. Under the directions of the Local Board the Sanitary Inspector has made two regular house to house inspections of the whole municipality. Two, and in some cases three or more, additional visitations have been made to premises where unsanitary conditions or nuisances were found in the course of the regular inspection, in order to ensure their removal or abatement.

No cases of disease have been traced to the presence of privy-pits, but they have received attention according to the Act.

No instances are known of wells being affected by excreta or other refuse, or of streams or rivers.

The water supply is not affected by privy-pits, so far as known, nor by soil pollution, except in the case of two wells situated near the burial ground in the middle of the village.

No cases have been observed in this municipality of Small-pox, Scarlet fever, Measles, or Diphtheria; there has been one case of Whooping-cough, and no case of Typhoid fever.

There is one established slaughter-house within the municipality. The Sanitary Inspector has examined the premises ten times (he reports), and has, when necessary, caused the same to be cleansed and disinfected. The principal nuisance and danger to public health are due to a pig-pen connected with the slaughter-house. An attempt has been made to establish a second slaughter-house under conditions which are in violation of provisions of *The Public Health Act*, 1884; but the Local Board has called the attention of the occupant of the premises to the provisions of the law, and directed the Sanitary Inspector to prosecute for infraction thereof.

The attention of the Local Board has been given to the existence of the already overcrowded burial ground in the middle of the village, and a committee has been appointed to report in regard to the same, and a correspondence opened with the Provincial Board on the subject.

The unsanitary conditions and nuisances found in the village have been chiefly in the cases of neglected privies and pig-pens. A few manure heaps were found, which needed removal. Cellars were generally found well drained and in a clean condition, but in a few instances they were imperfectly drained, or their floors were composed of rotten planks. The removal of such unsanitary conditions was ordered by the Inspector in each case, and his attention given to the matter till his orders were complied with.

The houses in this village are, except in two or three instances, built on stone foundations.

The school premises, as well as the railway station in the village, have been regularly examined by the Inspector, and orders given to secure their being kept in a proper sanitary condition.

WM. J. PINNEY,
Secretary.

LAMBTON.

Thedford Village.

CHAIRMAN'S REPORT.

Our Board was legally constituted and established according to statute at the first meeting of our Council in May last, when a by-law to that effect was passed, appointing Drs. Munns and Cornell, and Thomas Lennox, Esq., as officers—who, together with the Reeve and Clerk, constitute a full Board. I have duly and regularly occupied my seat as chairman at each sitting—being in all eight meetings, including a preliminary one early in May, and on the 4th of August last, the Council under by-law, appointed Mr. Silvanus Cornell as Sanitary Inspector, and on the 24th of last month Dr. Warner Cornell was appointed Health Officer, *pro tem*.

It affords me great pleasure to be able to state that our municipality has every reason to be extremely thankful for its present very good sanitary condition, especially when compared with many other municipalities in our highly favoured Province of Ontario, and this is, in some not inconsiderable measure, to be attributed to the very efficient and prompt measures adopted by your Local Health Board. Typhoid Fever of a very malignant type was brought into the village from the township, and but for our immediate and decisive action would probably have been attended and followed with the worst of consequences. Also, during the summer, Hooping Cough and Scarlet Fever prevailed rather extensively, but in no instance with fatal results. We are unquestionably, in a sanitary respect, reaping great benefits from the action taken by the Council during the preceding year in tile-draining the village, as extensively as our money would permit, where such

drainage was most urgently required ; the natural and inevitable results of the severe drought of last summer being thereby considerably mitigated. We had also to confer with the Township Board of Health requesting them to look after a slaughter-house just outside our own limits, which, at the time had become, and was a terrible nuisance to the inhabitants of our village. After that the evil was very soon remedied, and we have heard no further complaint respecting it.

I must congratulate you on the very general cleanliness of the inhabitants of Thedford, and trust that in this matter I may always be able to do so. And I would request all householders intending to empty or fill up their privy-pits, to obtain proper information from any of the officers of our Local Board, and wherever it is practicable to replace the same with dry closets—plans of which any of the officers can furnish.

STEPHEN CORNELL,
Chairman.

MIDDLESEX.

Wardsville Village.

CHAIRMAN'S REPORT.

The Board did the work without an Inspector. So the report I shall give will have to suffice for that of a Sanitary Inspector.

We met four times and took a general inspection of the village. The place is so well situated and watered that we have very little trouble with disease. Was compelled to notify some parties before the nuisance was removed, but met with no resistance. There has been but very little disease in the place.

E. T. DUFTON,
Chairman.

WENTWORTH.

Waterdown Village.

MEDICAL HEALTH OFFICER'S REPORT.

It is my pleasing duty to report to you that during the past year our pleasant little Mountain Village has been exempt from any wide-spread outbreak of disease of an epidemic nature. It is true that we have been visited with some diseases of an infectious character, but they have been isolated cases and consequently endemic ; and from the fact that our village is very favourably situated on the summit of this ledge of mountain, with a large ravine dividing it into two parts, and said ravine being the source of a never-failing stream, thereby acting as a natural sewer to the village, and from the fact that we have but little stagnant water, I attribute in a great measure the health we enjoy.

While we are thankful for these natural advantages, we ought not to close our eyes and cry "safe," for in the past we have been visited with diseases of an epidemic nature that have spread from home to home that might have (in a measure) been avoided, had we not been ignorant of ways and means ; and the day may come when we shall have a like visitation in future. Nature in many instances requires assistance.

Let me point out to you something that might be done in this village for the furtherance of public health :

1. If not force, educate the people to have their privies properly disinfected once a week, or once a month at least : especially should you see to the one at our public school. The cost would be a mere nothing in comparison to the good it would accomplish.

2. Make it compulsory that all garbage, offal, manure, etc., from dwellings be disposed of once a month at least, where the Board see that it is necessary.

3. See that all cases of an epidemic nature be reported to you at once by the attending physician, so that you may take the proper steps to prevent the spread of the same.

4. Make it compulsory that all such cases present a physician's certificate before admitted back to school.

These four instances I have given you, I think should be carried out, and if it was so, it would be the means of preventing one-half of the sickness of any municipality.

During the past year, I have had under my care the following cases in this municipality :—Scarlet Fever, five cases ; Diphtheria, 19 cases ; Whooping-Cough, 2 cases ; Enteric Fever, 1 case.

J. A. MCGREGOR, M.D.
Medical Health Officer.

BRUCE.

Wyarton Village.

SECRETARY'S REPORT.

The Board has made a thorough inspection of all premises four times during the hot weather. No infectious diseases have occurred in the village during the year. Slaughter-houses are kept in a clean condition during all seasons.

T. D. GALLOWAY,
Secretary.

TOWNSHIPS.

MIDDLESEX.

Adelaide Township.

SECRETARY'S REPORT.

The Secretary of the Board in compliance with the requirements of the Act, 1884, begs to report as follows :

That the Municipal Council of the Township of Adelaide, at its meeting in May, appointed three members, namely, Messrs. Russell B. Smith, Wm. Chapman, and Samuel Foster ; Duncan A. Campbell, Reeve, as Chairman ; Wm. Miller, Clerk and Secretary ; Walter W. Hoare, M.D., compose said Board. No Health Inspector has been appointed as yet, but the physician, chairman, and all the members of the Board, are vigilant in looking after the sanitary condition of the township.

There have been no contagious or infectious diseases during the year, with the exception of Whooping-Cough among the children.

The Board feel that the public health of the township demands their best attention ; but feel that to comply at once with all the requirements of the Act, cannot be attained, unless the cheerful compliance of the people themselves be obtained.

WM. MILLER,
Secretary.

 RENFREW.
Admaston Township.

SECRETARY'S REPORT.

The Local Board is not very active, no special object having engaged its attention during the year; nor has it appointed a Medical Health Officer or Sanitary Inspector. There is no by-law in force relating to privy pits, and where there is not the excreta is generally deposited with the manure of the yard. The water-supply, which is had from wells, springs, and creeks, is said to be excellent, and not polluted by outhouse contents or surface-water. Have not yet had cause to take steps regarding the erection of an isolation hospital, or the disinfection, etc., of persons, clothing or houses, no infectious disease having visited here. The township is healthy and in a good sanitary condition.

GEO. BERLANQUET,
Secretary.

 LENNOX AND ADDINGTON.
Township of Adolphustown.

CHAIRMAN'S REPORT.

Since our organization we have devoted considerable attention to the practice of cleanliness and otherwise with the residents of this township, and have found none but have been kept in good sanitary condition, so far as our observations have gone.

There has been no sickness in the township for the last six months, except from old age, or from long standing cases of consumption.

The Council appointed Dr. Young, Health Officer, and W. N. Mallory, Sanitary Inspector, but neither have furnished any report up to this time.

W. N. MALLORY,
Chairman.

 BRUCE.
Albemarle Township.

CHAIRMAN'S REPORT.

I have the honour to present, herewith the First Annual Report of the Local Board of Health for the Township of Albemarle :

This Board would respectfully urge upon the Council the importance of appointing a Medical Health Officer for this municipality.

Physicians, as a rule, are in a position to have their attention drawn much more frequently than any others have, to the bad sanitary condition of the people; and this Board is of the opinion that some arrangement might be made with one of the local physicians, at a nominal salary, to perform the duties of a Medical Health Officer; for we think it would add but little to his labour, as all that is required would be a note of his observations taken in his frequent calls through the township, and report the same to the Board, together with his suggestions.

Owing to no such appointment having been made in this township, the amount of information laid before the Board relative to the sanitary condition of the municipality has been much more limited than it would otherwise have been, and the object and actions

of the Board limited accordingly ; but we deem it a matter of congratulation that there has not been a single case of any contagious or infectious disease brought to the notice of this Board during the year, and, as far as ascertained, the public health of the township is in a very satisfactory condition.

Owing to the thinly settled state of this township, and it being naturally a very healthy locality, a Local Board of Health is not deemed a great necessity ; nevertheless, in the event of a breaking out of any epidemic and infectious disease, a Local Board of Health would no doubt perform valuable and efficient service.

ANDREW WEIR,
Chairman.

RENFREW.

Township of Alice.

SECRETARY'S REPORT.

It is a matter of thankfulness that during the present year the township has not been visited with any widespread cause of mortality or sickness beyond the ordinary causes, except some cases of Typhoid Fever, which were confined exclusively to one family, and the physician in attendance pronounced it not infectious, but gave it as his opinion that it originated from impure water or some other local cause. A committee of the Board made an inspection of the premises and well, and found it located in close proximity with the barnyard ; we also gave instructions to use no more of the water from the well, and advised it to be filled in. We have made an abstract of By-law annexed to the Public Health Act, and have caused a sufficient number to be printed and distributed to all the householders in the township. We have also supplied the several doctors practising in the township with forms, as contained in Rule 3 in said By-law, and also had a sufficient number of cards prepared and printed in accordance with Rule 4.

J. M. KENNEDY,
Secretary.

BRUCE.

Amabel Township.

CHAIRMAN'S REPORT.

Inspection was made of anything in the township calculated to be the engendering element of disease, and, when required, disinfectants were used. Township is in a very healthy condition.

A. B. TAYLOR, M.D.,
Chairman.

DUFFERIN.

Amaranth Township.

SECRETARY'S REPORT.

The Amaranth Council held a meeting on May 31st, and the Clerk notified them of their appointment, and forwarded to each member a copy of *The Public Health Act* ; but as yet no action has been taken by them, owing to the fact, I think, of the Act not providing any remuneration for their services, except at the discretion of the Council.

A practising physician was appointed as Medical Health Officer, at a meeting held on November 8th, but so far has not made any report of the sanitary condition of the township, in compliance with Sec. 1, Schedule "A," of the said Act. No salary was provided for his services.

No precautions are taken to prevent the spread of disease in this municipality, but there have been no contagious diseases that progressed to any great extent.

There were, during part of last winter and spring, a number of cases of Scarlet Fever, which spread for a short time and caused some alarm; but through medical skill the disease was checked before it had advanced to any great extent. Again, towards the fall of the year, Typhoid Fever was brought into the township by a visitor from the neighbourhood of Chatham, five cases arising therefrom, all of which recovered and the disease arrested. With these two exceptions no contagious diseases have existed except those pertaining to children, such as Whooping-Cough, etc.

MATTHEW G. VARCOE,
Secretary.

WENTWORTH.

Township of Ancaster.

CHAIRMAN'S REPORT.

The local Board of Health of the Township of Ancaster, in presenting their annual report on the sanitary condition of the municipality of the Township, beg leave to say that they adopted the course and acted upon the questions bearing upon the sanitary work of the Local Board, and the condition of the municipality.

The removal of nuisances, such as the carcasses of dead animals, the pollution of streams, and the cleansing of slaughter-houses, glue and bone-dust factories, have been attended to. Two privies have been removed, because of their dangerous proximity to wells, and erected at a safe distance.

There have been six or seven cases of Diphtheria and seven or eight cases of Typhoid, supposed to be propagated by the filth in a pond near the dwellings.

There are several nuisances in existence yet, which will require looking after.

The Local Board would further report that, from the returns of deaths reported to the Division Registrar, the general health of the Municipality compares favourably with the preceding year; and that, of 54 deaths registered for the present year, only two are reported from contagious diseases, viz., Typhoid Fever.

T. A. WALKER,
Chairman.

LEEDS AND GRENVILLE.

Augusta Township.

SECRETARY'S REPORT.

Your letter of 21st October was laid before the Chairman of our Local Board of Health, but as no Medical Health Officer has been appointed, and we have had no epidemic or infectious diseases prevailing in this Township, no sanitary work has been done, consequently the Chairman thought it unnecessary to call another meeting of the Board.

M. MYLKS.
Secretary.

WENTWORTH.

Barton Township.

SECRETARY'S REPORT.

In compliance with the provisions of *The Public Health Act*, I beg leave to make the following report:—

We have a Local Board actively engaged, and have made examinations of all slaughter-houses in the municipality, and in some cases have found them kept in good order, in other cases have found them not in good condition, but was everywhere met with a willingness to comply with the recommendation of the Board. Have also examined a number of private properties, and in some cases found them in a very filthy condition. In one case no less than six water-closets were placed over an open drain, and the filth in them causing such a stench that it was quite unbearable, the Board at once ordered the removal of the water-closets, as they were within a few feet of the dwellings. The delivery of night-soil from the City of Hamilton has given the Board perhaps more trouble than anything else, as a number of persons are anxious to procure it for manure. They were allowed to have it brought to their premises, they to disinfect it, which in most cases was done. Two or three parties would not comply with our instructions, and they were ordered to quit, which they did not do; and as they persisted in disobeying our instructions they were brought before the Police Magistrate and fined five dollars each, which had a good effect, not on them alone, but on others too.

We have not any Medical Health Officer.

There have been a very small number of cases of infectious diseases reported. There are no particular precautions taken in regard to isolation, but great care is taken in regard to disinfecting houses, clothing, etc.

The children do not have to present a medical certificate before re-admission to schools, in cases where contagious diseases have existed in the family.

ROBERT D. BENSLEY,
Secretary.

CHAIRMAN'S REPORT.

As Chairman of the Board of Health for the Township of Barton, I beg leave to submit the following report for the year 1884:—We visited all the slaughter-houses in the north and south part of the township, the Ontario pork factory, and Mr. Rowlin's gut factory. We found most of the places in as clean a condition as could be reasonably expected. Where we considered an improvement could be made, we suggested a liberal use of carbolic acid and lime, and revisited to see that our suggestions were carried out; and I am pleased to say nearly all parties acted upon our advice. We had to prosecute three parties for depositing night-soil and leaving the same exposed; we tried our best to avoid this unpleasant course, but our persuasive powers failing, we had to take more stringent measures. The total expenses of the Board for the year are sixty-eight dollars. Trusting this report of our work will be approved of by your honourable body, etc.

HARRY BRYANT,
Chairman.

WELLAND.

Bertie Township.

CHAIRMAN'S REPORT.

The undersigned, being Chairman of the Local Board of Health for the Township of Bertie, begs leave to report for the information of your honourable body, as follows:—

The Board of Health organized according to statute on the 26th day of May, 1884.

Several complaints were received during the year, and by order of the Board the Sanitary Inspectors were authorized to inspect the premises and report to the Board; they were also instructed to make a general inspection of the township, which they performed, and reported results to the Board.

No contagious or infectious diseases were reported to the Board during the year.

I am of the opinion that the sanitary condition of the township at this date is good.

Several of the nuisances complained of were abated after an inspection by the Sanitary Inspectors.

C. RISELAY,
Chairman.

MEDICAL HEALTH OFFICER'S REPORT.

In submitting this my first report, I have pleasure in stating my duties have been very light. No case of contagious disease, or other matter requiring my attention, has been officially reported; but having knowledge that a mild form of Scarlet Fever had been lurking in the western part of the township for nearly two years, and that it was gradually working eastward, and fearing it might assume a more virulent form, I endeavoured to have it stamped out, and to that end conferred with the Trustees of School Section No. 10, where an outbreak had occurred; and using due precaution in the case of Mr. W. W. Bowen's family, then down with it, we were happily enabled to prevent its further spread. And to my knowledge there has been no case of any contagious disease within this municipality since July until now, as I am informed, though unofficially. There have recently been two cases, ending in death, in the family of Robert Clough, under the care of Dr. Douglass, and I have written him concerning the matter, urging every precaution to prevent its spread, and offering any assistance in my power. I find a disposition among the people to ignore the provisions of the Health Bill, but I trust that a better knowledge and more mature consideration of its merits, will lead to a general acceptance of it as a good measure, and so prevent a lamentable waste of human life.

N. BREWSTER, M.D.,
Medical Health Officer.

WENTWORTH.

Township of Beverley.

SECRETARY'S REPORT.

The sanitary work done in this municipality during the year is nothing. I received a book from the department in Toronto for the Inspector to enter his notes when making his inspection. I offered the book to the Inspector; he said he had not been called upon in the way of requiring to use the book, and he did not take it. He has not called for it yet, I presume for the same reason.

The township as a whole, so far as I know, has been about as healthy as usual. The number of deaths for the current year will, I think, exceed the average. Up to this date over seventy have been reported to me as registered. I can't say that the extra number is caused by any particular disease, but I find the number of deaths of persons of the age of 70 and over to be greater than usual. The number reported to me between 70 and 80 is fifteen; between 80 and 90, seven; and between 90 and 100, two.

In many of the wells in this township the water is obtained by drilling into the rock. The water from such wells and the springs is generally pure.

There is a large cedar swamp in the north part of the township of many hundreds of acres, that in the spring of the year, or in case of a freshet, is covered with water; but it is not considered that the health of the people living near it is affected thereby.

In conclusion I have only to say, that although the work done by the Board for the present year has been but slight, and it may be said by some that the Board of Health is unnecessary and an expense for nothing ; but should the municipality or any part thereof be visited by an epidemic, the machinery will be ready to be put in motion to prevent the spread of the disease.

W. McDONALD,
Secretary.

MEDICAL HEALTH OFFICER'S REPORT.

I beg to report that I was appointed Medical Health Officer to your Board on the 9th of June, 1884.

That since that time some cases of Diphtheria and Scarlet Fever have come under my care, and one death occurred as the result of Scarlet Fever. Precautionary measures were at once enforced, and the diseases soon stamped out.

No reports of contagious diseases have reached me from medical men who practice in the township, nor have any complaints been made by individuals, so I am able to report favourably upon the state of public health in the township.

J. W. SMITH, M. B.,
Medical Health Officer.

PERTH.

Township of Blanshard.

SECRETARY'S REPORT.

I may state that our Local Board of Health has done very little, for the simple reason of nothing coming under their notice. We met three times and inspected one cheese factory, one creamery or butter factory, and one school, and found them neat and clean, with the exception of the water-closets and well of the school-house, which have since been thoroughly renovated. No other cases have come under our notice. The water-supply is mostly good spring wells—is not affected by any filth. Our township is mostly high, dry land, and is pretty thoroughly drained, so that there is very little stagnant water, if any. Only one case of disease of a contagious nature came under our notice, a little girl who died of Typhoid fever ; she was attended by our Medical Health Officer, viz., Dr. Irving, of Kirkton. We have no Sanitary Inspector, and the Board is looked upon by the people as a bill of expense in our township, but is considered a capital thing for cities, towns, and villages. I cannot give you any fuller report than what is contained in this note. Hoping it will be satisfactory, I remain yours respectfully,

S. CLARKE,
Secretary.

OXFORD.

Blandford Township.

SECRETARY'S REPORT.

In accordance with the provisions of *The Public Health Act*, 1884, the Board of Health for the Township of Blandford beg to report as follows :—

At a meeting of Council of this township held on 28th May, a by-law, amending the by-law appended to *The Public Health Act*, was passed ; but as the sanitary condition of

the municipality was quite satisfactory, it was not deemed necessary to appoint a Health Officer or Inspector.

Only one complaint of nuisance was made since the organization of the Local Board; the offender, a butcher in the vicinity of the Town of Woodstock, was promptly notified to clean up his yard, and we have reason to believe that he acted in accordance with our instructions, as no further complaints were lodged.

No notice, as provided by section 46, has been given to this Board of the prevalence of any infectious diseases, although one case of Small-pox recently occurred in the township—the patient having contracted the disease in Brantford. Fortunately, owing to the comparatively isolated position of the family, and the precautions of the medical attendant, no further cases occurred.

J. SMITH, JR.,
Secretary.

WENTWORTH.

Binbrook Township.

CHAIRMAN'S REPORT.

Taking into consideration the clean and healthy state of the township, we thought it unnecessary to appoint a Medical Health Officer or Sanitary Inspector. Our attention has been called to only one case of nuisance, that of a slaughter-house in the Village of Hall's Corner, which has been removed to the satisfaction of the inhabitants, and after making diligent enquiry, we find the township in a clean and healthy condition. But in view of the danger of that awful scourge (the Cholera) visiting our country next year, we would recommend that the Council appoint a Medical Health Officer and Sanitary Inspector, and that the law be enforced not only to prevent disease, but to have all cases of infectious and contagious diseases properly isolated. We trust that the inhabitants of Binbrook, in view of the danger of an epidemic, will do all in their power to assist the Board in carrying out the law for their own safety, as well as the safety of the public in general.

W. G. FLETCHER,
Chairman.

LAMBTON.

Township of Bosanquet.

SECRETARY'S REPORT.

The Council of the Township of Bosanquet, in accordance with the requirements of the *Public Health Act*, did appoint a Local Board of Health for said township.

Your Board beg to report that the sanitary condition of the said township is satisfactory, and that no contagious disease has come to the knowledge of your Board during the last six months, with the exception of a few mild cases of Whooping-Cough and Measles.

The only complaint made to the Board since its organization was one in regard to the existence of a slaughter-house owned by a resident of the Village of Thedford, the said slaughter-house being situated in the Township of Bosanquet, in close proximity to the public highway and several private dwelling houses; your Board have decided to take the necessary steps for its removal.

We beg further to report that no Medical Health Officer has been appointed by the Municipal Council of Rosanquet, as the said Council and your Local Board of Health did not consider it necessary.

ADAM DUFFUS,
Secretary.

BRUCE.

Brant Township.

SECRETARY'S REPORT.

I have to report that the Local Board of Health was organized in accordance with *The Public Health Act*. Inspection has been made of various places where, if in an unsanitary state, disease might be the result, and when found in this state the proper remedies were applied. No contagious diseases have been reported, and to the best of my knowledge the township is in a good state, so far as health and sanitation are concerned.

JAS. S. LAURIE,
Secretary.

BRANT.

Brantford Township.

MEDICAL HEALTH OFFICER'S REPORT.

Owing to the short period of time that has elapsed since the organization of this Board of Health, it is impossible for me to submit to you anything but a meagre and incomplete report. I beg, therefore, to lay before you a short statement of what has been done, and my experience and impressions since its organization. There have been so far, I think, but two complaints made to this Board, and in each case prompt action was taken to remove or abate the nuisance complained of. The first was the fertilizing establishment north-east of the city, where the night-soil from Brantford is carted and manufactured into a valuable land fertilizer. This place was visited by all the members of this Board, and although some time has elapsed the business has only lately been finally stopped. I think now, however, the establishment is closed for good, and another place at a proper distance from any dwelling will have to be procured before the business will be allowed to go on.

The second complaint was from West Brantford, from a very disagreeable smell arising from two slaughter-houses in the Township of Brantford, adjacent to West Brantford. These houses were also visited by the full Board, and notice given to the owners to stop slaughtering and clean up the offal, etc., around the houses; and I also sent a notice myself to these gentlemen, owing to their tardiness in cleaning up the nuisance, and requesting the removal of both slaughter-houses to a legal distance from any dwelling or street, within a specified time. There are many other fruitful sources of disease in this township that I would strongly urge on every individual member of the Board to take into consideration, and endeavour as far as possible to have removed. Among these I might mention "surface accumulation of stagnant water," which is a fruitful source of malaria, and malaria is the cause of a large percentage of the prevalent diseases in our township. Steps should be taken to compel owners of lands where such conditions are present to open up drains for the escape of the waters, and if not able the Township Council should take the matter in hand. Public money when used in mitigating or removing sources of disease, is always well spent.

Another very important matter and one which should be instilled into the minds of every householder, is the proper method for the removal of excreta. The common privy-pit is one of the most common causes of Typhoid Fever. I have during my practice frequently traced the origin of this fatal disease to the pollution of the drinking water used by the family. The dry earth-closet, now coming into use, if adopted by every family, will certainly greatly abate this particular disease, and will be conducive to health in many other ways. I think one of those excellent dry earth-closets should be kept on exhibition in Brantford, with printed explanations posted on it, showing everyone how to use them, the cost, etc. This in my opinion would much more quickly bring them into

general use. I might also mention two more sources of disease which are very common in country places. One, that of allowing surface water to wash into wells, carrying with it all the filth that may be deposited around, as the excreta of animals and fowls, etc., loading the water drunk by the family with a deadly poison, both animal and vegetable. Water from a well may be clear and cool, and still be very impure. It is a mistake to suppose that when water filters through a few inches or feet of earth it is pure. In such water are often found the germs that produce Typhoid Fever, Bowel complaints, and other diseases. Wells should be raised several feet above the level of the ground with brick and mortar, and tightly closed in at the top to prevent any leakage into them from above. The second cause and the last I will mention in this report, is dampness in houses from defective drainage. It is a mistake to suppose that because there is no standing water in the cellar there is no dampness. The earth of the cellar floor may be saturated with water of the most filthy kind. I am certain that much sickness is produced by this cause. Many diseases of throat, lungs and bowels originate from this cause alone. There should be an open drain under every house that would purify at least two feet of earth at the bottom of every cellar, not only of water but also of impure air.

In order to carry these sanitary reforms into practice people will have to be educated as to the benefits to be derived from them, and then, if necessary, be compelled to carry them out in order to prevent the spread of disease. There are many other matters of information which might be mentioned, but this is enough to show the large field of sanitary reform before us. All of which is respectfully submitted.

D. MARQUISE,
Medical Health Officer.

CHAIRMAN'S REPORT.

As required by clause 3 of the Public Health by-law, I beg to submit herewith the first annual report of your Board of Health, containing a detailed statement of the work accomplished by the Board during the year, as follows:—

The Board held its first meeting on the 19th day of May, when a Chairman was appointed, and, there being no other business before it, the Board adjourned.

On the 16th day of August another meeting of the Board was convened by the Chairman, when the following complaints were laid before them, viz:

1. From Mr. W. H. Yapp, complaining of a very disagreeable and offensive odour, occasioned by night-soil being dumped in an adjoining yard by a fertilizing company. Your Board after considerable difficulty caused the company to cease operations, thereby abating this nuisance.

The next complaint was that of one Joseph Elliott, in reference to the slaughter-houses of Messrs. Livingston and Sage, and, as in the previous case, after considerable difficulty, the Board succeeded in getting these nuisances abated.

Accompanying this report you have a very full and carefully prepared report of the Medical Health Officer on the sanitary condition of the municipality.

WILLIAM BIGGAR,
Chairman.

ONTARIO.

Township of Brock.

CHAIRMAN'S REPORT.

In presenting my report, I regret to say I am not able to speak from personal knowledge so clearly as I would wish to be able to do, being unavoidably absent the greater part of the summer.

But from the information received from our very efficient Sanitary Inspector, must congratulate you that in a general way the sanitary condition of our township may be called good. The Township of Brock being in the main high and rolling, yet there are large tracts of low-lying swamp lands which are yet undrained, and which are overflowed with water every spring, remaining until June before it is entirely gone, the decaying vegetable matter of which must emit a vast amount of malarial poison to be carried by the winds through the surrounding country.

In the southern part of the township the people are with commendable energy draining their swamp lands, having nearly completed a drain some six miles in length, which will not only increase the value of their land for agricultural purposes, but will be of invaluable benefit from a sanitary point of view.

The municipality ought to be devoutly thankful to a kind Providence that our township has not been visited by any serious epidemic until the month of November, when Diphtheria made its appearance in two places.

The first occurred about the middle of November on Lot 5, in the 14th Concession, and according to information kindly furnished by Dr. Gillespie, the measures taken for disinfection were so good that the disease has spread no further.

The other occurred on Lot 12, Concession 3, of which they are yet suffering, two having died; the other members, I am pleased to say, are, I believe, recovering under the skilful treatment of Dr. McDermott, and it will require the best efforts of the Board to keep it from spreading.

Our township being almost purely agricultural, and the majority of the farmers of that class who keep abreast of the times, no longer allow the manure to remain lying in their yards during the summer, but remove it to the field in early spring, and indeed, in many cases it is removed as fast as it accumulates.

While many cheerfully complied with the request of the Sanitary Inspector with regard to the removal of nuisances, cleaning of wells, cisterns, etc., a few have refused or neglected to comply, and I think it would be wisdom on the part of the Board to enforce the law.

I would also recommend the appointment of a Medical Health Officer as soon as possible, for I consider the Board is incomplete without such an officer, inasmuch as the Inspector, no matter how diligent, would be unable to detect evils that if checked in time might save the outbreak of some epidemic.

All of which is respectfully submitted.

R. CUNNINGHAM,
Chairman L.B.H.

—
LAMBTON.

Brooke Township.

SECRETARY'S REPORT.

The only complaint made to the Board came from the Local Board of Health of the village of Alvinston, and was relative to stagnant water in an obstructed stream just outside the village boundaries, and close to the principal part of the village. It appeared that formerly the Sydenham River divided into two streams on the east side of the village, and when the Canadian Southern Railway Company were building their road, one of those streams was filled up by an embankment a short distance from where the streams again united, thus leaving a portion of the stream above the railway into which the water ran without any means of exit. The Boards addressed a letter jointly to the Superintendent of the Company asking him to order the streams or channels to be connected, which request was complied with.

The Municipal Council have not appointed a Medical Health Officer nor a Sanitary Inspector, hence I have no such reports to embody in this.

Originally there was a large quantity of low and wet land in the township, but the

Township Council have expended a large sum in draining those lands, so that now nearly every side-road and concession is opened up and ditched. In some places where runways were not on roads ditches have been constructed in them, so that I may say we have no swamp land.

Ague and Malarial Fevers were not so common as in previous years. The general health of the people in the municipality is good, and I know of no nuisance to call forth the interference of the Board.

W. G. WILLOUGHBY,
Secretary.

BRANT.

Burford Township.

SECRETARY'S REPORT.

In reply to your circular I am instructed by the Reeve to say that no Inspector has yet been appointed for the Township of Burford, as no nuisance was reported or known to exist, except the feeding of hogs at two cheese factories. Their plans could not be very well changed in the middle of the summer, but will be before another season begins. I hope we may be in better shape next year. I recognize the necessity of an active Local Board of Health. The health of the municipality is, on an average, good.

ALBERT FOSTER.
Secretary.

PEEL.

Township of Caledon.

MEDICAL HEALTH OFFICER'S REPORT.

It affords me considerable pleasure to render this the first report to the first Board of Health established in Caledon ; it is an evidence that we are keeping pace with the times, and that we are not falling behind the onward march of civilization. The preservation of life and health, and the sanitary laws governing the same bids fair to become the great science of the future. And when we think of the suffering and death caused by the neglect or ignorance of these laws, we must surely feel it our duty as men and as a Board to do all we can to promulgate a general knowledge of sanitary science, and to prevent as far as possible the origin and spread of disease dangerous to the public health. I regret to say that I am unable to furnish any full statistical report, or even an approximate one, of the whole municipality. This was a great disappointment to me, as it will no doubt be to you, but it is due to the fact that up to the present time none of my confreres practising in Caledon have as yet furnished me with a single report, as requested by Rule 1, section 17.

Shortly after our organization on the 9th of June, I mailed to every physician practising in the municipality blanks on which to report infectious diseases, and for reporting death or recovery from the same. Early in July, on receiving a communication from the Secretary of the Provincial Board regarding this matter, together with a request as to my so-called weekly statistical reports, I sent him a list of the physicians practising in Caledon, asking him to couple his request with mine regarding the sending of their reports to me ; but with the same discouraging results. My purpose then was to send a report of all cases occurring in my own practice, but as those reports would not be at all representative, I finally concluded to wait until a more satisfactory state of affairs could

be brought about. The indifference met with regarding these reports has no doubt prevented much useful work that might otherwise have been done, and very materially impeded our progress. It is in rural municipalities that this indifference is most keenly felt, for in incorporated towns and villages almost every case of infectious or contagious disease is within the cognizance of the Sanitary Inspector, or Medical Health Officer. However, I trust that the steps taken at our last meeting, together with the pressure of public opinion, will gradually remove this indifference, and that long before the next annual report is rendered, we may be receiving full statistics of the whole municipality, enabling us to do much good and useful work for our own municipality, and to assist the Provincial Board in the noble work they have undertaken.

Regarding the sanitary condition of the municipality, my remarks of course shall only be general, owing to the want of statistics on which to base my report. Our high mountainous position, the light dry nature of our soil, and the generally pure character of our water, give us almost an immunity from Typhoid and Malarial Fevers. I might except the lower or southern part of Caledon, below the mountain ridge, where Typhoid and Malarial Fevers are more prevalent, due to the low swampy nature of the locality; but this district includes only the smaller part of the township, and even here cultivation of this low land is fast removing these influences. If Caledon were compared with other townships throughout Ontario, I am satisfied that it would show a state of public health far above the average, but this, I think, is more due to our natural advantages than to a particularly good sanitary condition. Amongst the farming community generally the sanitary condition of their homes is very fair, but there is great room for improvement, the greatest difficulty in many instances is the pollution of their drinking water by soakage or drainage from the barn yards into their wells; in some cases the well is situated in the barn yard or near it, and in other cases, even although the well may be some distance away, it is situated on a lower level than the barn yard, thus necessarily producing a certain amount of drainage or soakage during wet or rainy seasons, and the pollution of otherwise pure water. I might say that all the cases of Typhoid Fever occurring in my own practice outside of the villages have been due to this or the like causes; very frequently the violence of other non-contagious diseases has been increased by the pollution of drinking water introducing that Typhoid or low element into other diseases, which is so often spoken of by physicians.

In the villages of the municipality, viz.: Alton, Charleston, Mono Mills, Caledon East, Cataract, Belfountain, and Credit Forks, the general sanitary condition is worse than in the more rural districts, due to the houses being more closely crowded together, and in many instances to uncleanness; one evil of a general character is the damp and uncleanly nature of cellars; in many cases water finds its way into cellars in the spring, and remaining there for months afterwards pollutes the atmosphere of houses which might otherwise be pure—in other cases the remains of apples, potatoes, turnips, etc., which have rotted during the winter, are left from year to year. These two conditions have frequently in my own experience produced local outbreaks of Diphtheria, and I have doubted whether they have not sometimes induced Croup and Bronchitis. Another evil is the throwing of table refuse and slops of all kinds just outside of the door, particularly during winter, leaving the door yard a perfect cesspool in the spring when the snow thaws away.

Then, as a general rule, hog-pens remain uncleared for months, even during the summer; and many of the privies are never cleaned at all. In Alton during the past few years I have noticed the deleterious influence of a large slaughter-house, up to the time of its removal in the summer of 1883. Five of the houses in the immediate neighbourhood of the slaughter-house used their drinking water principally out of the one well. Every spring the children living in these houses were subject more or less to Croup, Diphtheria, and Bronchitis, and out of these houses in three years there were three deaths from Croup, and one from Diphtheria, besides many other cases of Diphtheria which recovered. These cases always occurred when there were no other cases of the kind in the vicinity. I repeatedly urged the removal of the slaughter-house, during my residence in Alton, but it was not until a year ago last summer that it was removed. The result was that since its removal there has not been one case of Diphtheria or Croup, or any sickness of a

serious nature whatever. In the village of Cataract there have been recently five cases of Scarlet Fever of all degrees, from the mildest to the most violent form, and one of which proved fatal. There were not in the township any other cases of Scarlet Fever at this time, and I naturally began to look about to see what the sanitary conditions of these places were. I found the surroundings of the houses in which these cases were in a very bad condition, privy-sinks that have not been cleaned for years, broken down stables that have been used for hog-pens, and places for slaughtering hogs filled with manure and filth. I would not say that these conditions caused the outbreak, but I am satisfied they increased the virulence of the disease; may, perhaps, have localized the infection. I have ordered the removal of these nuisances, and I trust the order will soon be complied with.

I have pointed out these evils, gentlemen, to show you the work that is in store for us, and that even in this comparatively healthy township much remains undone. I might venture to say that I believe the easiest and the best way to remove these evils, is to educate the people. Teach them that these things are evils, and that they are dangerous to their own lives, and to the lives of those that are near and dear to them—then they will have both an object and a duty in the observance of sanitary laws.

I believe that in questions like these, education is as necessary as legislation, and that the two should go hand in hand. Much could be done by introducing lectures on the subject into our common schools. The youth should learn that physical education is as important as mental education—teach them that pure food, pure air, and pure water are essential to life and health.

I believe the Education Department have now recognized the importance of teaching Hygiene and Physiology in our public schools, and I believe that greater advancement can be made in this way than in any other.

In conclusion, gentlemen, let me say that I hope we will become a Board of Health in reality, as well as in name; and that each and every one of us will do all he can to further sanitary progress.

Trusting that the shortness of time which has elapsed since our organization, and the want of statistics, may excuse the inefficiency of this report.

JAMES ALGIE, M.D.

MIDDLESEX.

Township of Caradoc.

SECRETARY'S REPORT.

The sanitary condition of the township is very satisfactory.

A. M. McEVOY,
Secretary Local Board of Health.

NORTHUMBERLAND AND DURHAM.

Township of Cavan.

SECRETARY'S REPORT.

I might mention that the Council of the Municipality of the Township of Cavan, in the County of Durham, appointed a Local Board of Health for said municipality, in accordance with *The Public Health Act of 1884*—(the names and addresses of the parties comprising such Board I sent to your address immediately after their appointment). The

Board have not appointed a Medical Health Officer or Sanitary Inspector, as they do not think it necessary to do so, as the township is in an excellent sanitary condition.

GEO. SOOTHERAN,
Secretary.

CHAIRMAN'S REPORT.

The Statute calls for a report from the Chairman of each Board of Health. In compliance, I would say that the Local Board for the Municipality of the Township of Cavan, in the County of Durham, has had two meetings during the year 1884, which have been attended by all the Board excepting one at our last meeting. Our township is nearly all composed of high, dry rolling land, with fine swift-running streams through it, the water being first-class.

Our people are getting more enlightened in reference to diseases, and are strictly guarding against spreading any infectious disease. At our last meeting the Board thought it unnecessary to appoint a Medical Health Officer at present, in consideration of our municipality being in a good healthy condition. I trust our successors will look after any infectious diseases that may occur in our township.

I am certain you will agree with me that we have reason to be thankful to the Almighty for the healthy condition of the township at this season of the year.

JAS. McLEAN,
Chairman.

MUSKOKA AND PARRY SOUND.

Chapman Township.

CLERK'S REPORT..

The first meeting of the Local Board of Health for the Township of Chapman was held at the Village of Magnetawan, Nov. 29th, 1884. Present: Hugh Irwin, Donald Gordon, and T. G. Pearce.

It was moved and seconded, that Donald Gordon be appointed Sanitary Inspector.

The members of the Board present inspected the various premises in the village, and found the sanitary state of said premises to be very satisfactory, especially the hotels.

T. G. PEARCE,
Clerk.

PEEL.

Chinguacousy Township.

SECRETARY'S REPORT.

The annual report of the Chinguacousy Board of Health is necessarily brief, as it has only been organized six months, and it has not yet appointed either a Medical Health Officer or Sanitary Inspector, in consequence of the not unusual difficulty of selection in such cases. The Board has met thrice since its establishment, but has had little to occupy its attention beyond the removal of a few local nuisances, the sanitary condition of the municipality during the period referred to having been excellent.

SAMUEL GRAY, SR.,
Secretary.

NORTHUMBERLAND AND DURHAM.

Clarke Township.

SANITARY INSPECTOR'S REPORT.

In pursuance of a resolution passed at a meeting of the Local Board of Health, held on the 11th inst., at Orono, I beg to submit the following report: Having traversed that part of the Township of Clarke allotted to me for inspection, in nearly every direction, and having made diligent enquiry everywhere, I have not heard of a single case of contagious disease at present existing within the limits of my division of the township; and yet notwithstanding this agreeable fact, I have in too many instances observed great indifference respecting the sanitary requisites for the preservation of health. I found hog-pens within a few feet of dwelling houses; wells and water closets within a rod of one another. The majority of the school-house privies were in a neglected and filthy condition, of which fact I notified the trustees; house slops thrown continually in one spot to putrify and fester in the sun. Two slaughter-houses—one at Crooked Creek and the other at Newtonville—owing to their close proximity to dwelling-houses, will be regarded as a standing menace to public health unless they are speedily closed or proper disinfectants used, which, I fear, will not be the case. I noticed likewise that the refuse of a cider mill in the eastern part of one village, is thrown into the street, emitting an unpleasant odour. I notified the proprietor to discontinue the practice and to remove the deposit at once, which he promised to do. I gave warning to those persons whose premises were in a neglected condition to clean their wells, hog-pens, privies, etc., but whether they will heed the warning remains to be seen. In conclusion, I would just observe that the inspection given to my district was by no means as thorough as it might have been, owing to the shortness of the time devoted to that object; and, moreover, I fear that it will be a matter of much difficulty to enforce the law so as to compel even a partial observance of its provisions.

JOSEPH JACOBS,

Inspector.

STORMONT, DUNDAS AND GLENGARRY.

Township of Cornwall.

SECRETARY'S REPORT.

As Secretary of the Board of Health for this township, I have to state that this municipality is in a fair sanitary condition, excepting the small villages adjoining the town of Cornwall, and they have been kept in very fair order this year. But as our Board has not got into regular working order yet, I am unable to make a report, but I hope there will be more system in the coming year, and that there will be regular monthly meetings held during spring and summer months. We have got a medical man appointed as Health Officer, but not salaried, just paid for his time when he is employed, and in answer to the other questions, I would state as follows: 3, as found most convenient; 4, No. 6, No. 7, No. 8, as most convenient; 9, cleaned up every year; 10, No. 11, wells; 12, none; 13, No. 15, No. 16, d, six; f, one not reported; 18, nearly all; 19, No. 20, none; 21, none.

R. ANDERSON,

Secretary.

LEEDS AND GRENVILLE.

Crosby North Township.

CLERK'S REPORT.

Our Board was organized and held its first meeting on the 16th day of June, 1884. We have had in all five meetings, and appointed W. C. Fredenburgh Sanitary Inspector. Said inspector has visited, from time to time, all places where nuisances were reported to exist, and had such nuisances abated. Our Council did not appoint any Medical Health Officer, as they did not deem it necessary. I have much pleasure in reporting that the sanitary condition is, upon the whole, very satisfactory. There has not been any cases of infectious or contagious diseases within the limits of our municipality thus far, although Diphtheria has been raging on our very borders, in the village of New-boro', for the past two months, and has recently broken out at Bedford Mills in the adjoining township, and typhoid fever is also very near to us in the Township of Bedford.

JOHN McGUIRE,
Secretary.

WELLAND.

Township of Crowland.

SECRETARY'S REPORT.

Permit me to state that the Board for this township has never met since its organization. Considering by the terms of Sec. 20 of the Health Act, that it is optional to appoint a Medical Health Officer and Sanitary Inspector, they have appointed neither, consequently there is no report to make to the Council, as required by Sec. 24, and of course none to send to the Provincial Board.

I would also state that there has been no complaint for the abatement of nuisances prejudicial to public health from any quarter of the township, and calling the attention of the Board thereto; also, that this year, in this municipality, there has not been a single case of infectious disease. There are no villages in this township, it being a purely rural constituency, making inspection of premises less urgent. The health of the municipality may be gathered from the following statement: That from the first of July last to the time of writing, there have been five deaths out of a population of 1,213, as returned by the assessor. I have not the second annual report referred to by you. Hoping that the foregoing may prove satisfactory.

ALEX. REID,
Secretary.

LANARK.

Dalhousie and North Sherbrooke Township.

SECRETARY'S REPORT.

This Board wish to express their approval of the action of the Legislature in causing Boards of Health throughout the Province to be appointed, and beg leave to report that this municipality, so far as came under their observation or knowledge, is and has been, this last year, in a good sanitary condition, and consequently have not been required to take action in any special cases.

Dalhousie and North Sherbrooke have not appointed a Health Officer this year, nor Sanitary Inspector.

GEO. CAMPBELL,
Secretary.

NORTHUMBERLAND AND DURHAM.

Darlington Township.

SECRETARY'S REPORT.

With reference to your circular, dated 21st October, I have to state that nothing has been done in this township further than the appointment of a local Board of Health, and the issue of a public notice to the effect that any matter requiring the action of the Board would receive prompt attention. No application has been received in response to that notice, and it has not been deemed necessary to take any further action.

R. WINDATT,
Secretary.

MIDDLESEX.

Dorchester North.

CHAIRMAN'S REPORT.

The six cheese factories in this municipality have been inspected, and were reported to be in a very satisfactory state.

There has been no epidemic or contagious disease in this municipality this season of any serious character, but the inhabitants are in a state of good health in general; we have no slaughter-houses or bone factories, nor any other of those places that would endanger the health of the inhabitants; and further, the swamps and marshy places are getting to be well drained, and we are blessed with a good supply of pure water. To the above state of things we attribute the cause of the general good health of the inhabitants of this municipality.

RICHARD VENNING,
Chairman.

MUSKOKA AND PARRY SOUND.

Townships of Draper and Oakley.

CHAIRMAN'S REPORT.

The Local Board of Health for the above municipality, in making their first annual report, are pleased to be able to report favourably of the sanitary condition of this municipality, the number of deaths up to this time being eleven out of a population of twelve hundred and six, none of which were caused by any contagious or preventable disease. The Board was organized, according to Statute, on the 21st day of June. No Medical Health Officer has yet been appointed, none such practising in these townships. By instructions from the Board, notices were posted up in the post-office and other public places, calling the attention of owners and occupiers of houses to those sections (Schedule A) which relate to the providing of sufficient pure and wholesome drinking water, a matter that has been much neglected in these new settlements; also, to having the privy-pits a sufficient distance from the wells to insure the water from pollution from that cause.

No cases of disease have come under our notice during the present year. It is the intention of the Board to take action at an early day in regard to children attending school, in cases where contagious diseases have existed in the family.

ROBERT McMURRAY,
Chairman.

LANARK.

Drummond Township.

SECRETARY'S REPORT.

A Board of Health was duly organized, but our attention has not been called to any matter relating to the public health for the past year. No Medical Health Officer has been appointed; no particular method in force for the disposal of excreta; there are privies, but no local by-law respecting them. The water is considered very pure; some wells are affected by surface water.

I may state that I have been informed by Dr. Kellock, of Perth, that there are several cases of Diphtheria at present in the Township of Bathurst, adjoining this municipality. Two cases, I believe, have proved fatal. I understand that Measles is quite prevalent in North Elmsley, and that one union school between Drummond and Elmsley, has been closed in consequence.

THOMAS B. MOORE,
Secretary.

BRANT.

Dumfries South, Township.

SECRETARY'S REPORT.

The Board was organized and held their first meeting on the 26th day of May last. At the request of the Board, the Municipal Council appointed a Medical Health Officer and an Inspector. Previously, sanitary regulations were but poorly attended to and but little understood, and many difficulties stood in the way of carrying out sanitary reform; but the Board, anxious to do their duty, went cautiously to work, and through the efforts of the Inspector laying the matter before the people, great reforms were accomplished. The health of the municipality, on the whole, has been good; no epidemics have prevailed to any extent; no statements of infectious or contagious diseases have been reported by the physicians practising in the municipality. Five cases of Typhoid Fever have occurred in the Village of St. George, none in the Villages of Harrisburg or Glenmorris, and only a few in the rural districts. There has been only one case of Diphtheria, and a very few cases of Scarlet Fever in the spring, a great many wells were found impure; manure heaps close to the dwellings, and pig-pens in close proximity to wells, and water-closets in a very filthy condition. Most of these have been remedied, and in another year it is to be hoped that the sanitary condition of the municipality will be in a good state.

D. BAPTIE,
Secretary.

MEDICAL HEALTH OFFICER'S REPORT.

In submitting to you my report, I am glad to say that there has been a good commencement made this year towards checking the causes of infectious and contagious diseases, thereby relieving, to a certain extent, the severity of the sickness, and also the number of cases produced by these causes, and also keeping down the death-rate in our township. I have been called to visit different places where these causes existed, and had them removed as well and as promptly as I could, and saw a good result. I have seen a marked improvement in the condition of the wells and water-closets, which are two of the principal causes of infectious diseases, and which will require your strict attention as a Health Board. I attended one of your meetings and heard some good resolutions passed; some of them were carried out promptly and with good results.

The progress may seem slow, but it will and can only be accomplished by degrees, for the people must be educated to understand the importance of keeping their yards, wells, water-closets, and drains in good order.

Thanking you, gentlemen, for the efforts you have put forth to prevent the causes of disease, and wishing you every success.

E. C. KITCHEN, M. D.,
Health Officer.

PETERBORO'.

Dummer Township.

SECRETARY'S REPORT.

We have had no physician residing in the township for over a year, until about a week ago, a young man from Toronto commenced practice in Warsaw. He will, I presume, be appointed Medical Health Officer next year. This return is necessarily very imperfect, but, as near as I can judge, the township is in a fair sanitary state.

W. DARLING,
Secretary.

LANARK.

Elmsley, North, Township.

SECRETARY'S REPORT.

I beg to report as follows:—A Board of Health was appointed, but with the exception of having some dead animals buried, have not taken active measures regarding public health. Our municipality has been free from epidemic diseases, with the exception of a mild type of Measles, although Diphtheria has been prevalent in the adjoining municipalities of Smith's Falls and Bathurst. I think that probably more active measures will be taken by our local board next year.

P. McKINLEY,
Secretary.

LAMBTON.

Enniskillen Township.

SECRETARY AND CHAIRMAN'S REPORT.

The Board of Health for the Municipality of the Township of Enniskillen beg leave to report that a Board of Health was organized on the 9th day of May, 1884, and as there are two small villages in this municipality, it was necessary to appoint two Sanitary Inspectors, one for each village, and owing to the villages being very small, there is very little to report. Mr. John McGuire reports from Oil City that there were four cases of Typhoid Fever, but not of a very serious nature, as the inhabitants of the village kept the same in a very satisfactory state; there being nothing for him to do except to make an outlet for some water that collected in the water courses of the streets. The Inspector for the village of Marthaville has made no report whatever, but as there have been no complaints from that quarter, and no report of any disease, it is taken for granted that matters are satisfactory. You will please to pardon this brief report, it being the first season and took some time to get thoroughly organized, but hope next season to be able to present a more lengthy report on the sanitary condition of the municipality.

JOHN SMITH, Chairman.
JOHN L. WILSON, Secretary.

WELLINGTON.

Eramosa Township.

SECRETARY'S REPORT.

The sanitary work done by the Board of Health for the Township of Eramosa, during the year ending 1st December, 1884, is confined to two items, as follows :—

1st. A complaint was made that a pig-pen in a certain part of the village of Rockwood was a nuisance, and endangered the health of parties in immediate neighbourhood ; the Board requested the owner to remove the nuisance, which was promptly attended to.

2nd. A complaint was made that a badly constructed privy-vault, belonging to a party also in Rockwood, discharged its contents into a neighbouring lot close to the kitchen window, and the complainant also stated that his wife was ill on account of the nuisance. The place was visited by the Board who found the nuisance as represented, the privy complained of being badly constructed, and located on the top of a ridge of rock, and, as represented by complainant, carried the contents into his lot. A notice was accordingly served on the party on whose place the nuisance existed, requiring its removal to a location to be determined by the Board, and instructing them to communicate with the Board, and the Board on being communicated with, attended and selected a proper site, and the matter was thus disposed of.

The health of the municipality is good, no contagion having existed during the year ; water supply good.

HUGH BLACK,
Secretary.

Township of Erin.

SECRETARY'S REPORT.

As the local Board for this municipality was but lately appointed, and having had one meeting of the Board since, and nothing being before the Board no business was transacted, consequently I have no report, so far as the work of the Board is concerned, to make.

THOMAS YOUNG,
Secretary.

HALTON.

Esquesing Township.

SECRETARY'S REPORT.

This Board was organized in June last, and at its second meeting decided to apply to the Municipal Council for the appointment of a Sanitary Inspector.

The Council at once appointed an officer and he entered upon the discharge of his duties by visiting every house in the several villages, and recording in his memorandum book answers to the questions therein set forth. He also left at each house visited a printed sheet containing extracts from the Health Act for the information of the inhabitants. He has also, since the outbreak of Diphtheria in the village of Glenwilliams, visited the infected houses in that village and posted up the necessary notices. There are still eight or ten cases of Diphtheria there, but no deaths since my former letter. In the village of Norval there have been no deaths reported ; there are also some cases outside of the villages—one a farmer's wife, and at last account other members of the family were affected. Dr. Todd informs me that in some cases he cannot get parents to isolate

the patient, and it is most difficult to get them to use disinfectants, or to adopt proper measures with reference to the disposal of excreta, wash water, house slops, etc. There seems to be no way of getting over difficulties of this kind, except by regulations properly enforced by a Medical Health Officer.

J. MURRAY,
Secretary.

Township of Euphemia.

MEDICAL HEALTH OFFICER'S REPORT.

In compliance with Sec. 1 of by-law relating to public health, I have the honour to report a good condition of health throughout the municipality.

No epidemics of a contagious or infectious character have existed, to my knowledge, since my appointment, nor have any complaints been made to me regarding sanitary matters. Although I have good reasons for believing that many of the school-houses in the municipality require improvements in ventilation and general school hygiene, yet, as the trustees have made no application to me, I can make no report of their condition.

This delinquency, I am of opinion, arose not so much from indifference or neglect as from a want of knowledge relating thereto by the various Boards of Trustees.

Doubtless there are many things which require the attention of the Sanitary Inspector, or possibly the Medical Health Officer, in the municipality. But owing to a want of information among the people they have not been brought under my notice.

I can, therefore, only report an excellent condition of general good health in the township. I trust that in future all may feel the great necessity of carrying out the requirements of this excellent by-law.

M. DAVISON, M.D.,
Medical Health Officer.

WENTWORTH.

Flamboro', East, Township.

MEDICAL HEALTH OFFICER'S REPORT.

It is my pleasing duty to report to you that during the past year your municipality has been exempt from any widespread outbreak of disease of an epidemic nature. It is true that you have been visited with some diseases of an infectious character, but they have been isolated cases and consequently endemic.

Of these, I notice that Scarlet Fever has been the most frequent visitor, having sometimes four or five cases in one family. It did not spread from home to home rapidly, but where it spread at all, it was owing to carelessness, from the allowing of visitors or from improper disinfection.

Diphtheria we see cropping up here and there in almost every month in the year; this, in a great measure, is due to uncleanness about the premises.

Malaria we principally find along the banks of our streams and about marshy districts, hence the necessity of having said places properly drained when we see that it is required.

While we are thankful for the health that we are now enjoying, let us not close our eyes dreaming that this state of things will always last; for in the past we have been visited with diseases of an epidemic nature that have spread from home to home, that might have (in a measure) been avoided had prompt means been used, and the day may come when we shall have a like visitation.

Let me point out to you something that might be done in this municipality for the furtherance of public health:

(1) Make it compulsory that the trustees of each school section have the school privies emptied of their contents at least twice a year.

(2) Further, make it compulsory that the Trustees of each section have the privies properly disinfected at least once a month.

(3) See that all cases of an epidemic nature be reported to you at once by the attending physician, so that your Board may take the proper steps towards preventing the spread of the same; and, furthermore, that all such cases present a physician's certificate before being admitted back to school again.

I am fully convinced that if your Board could have these suggestions properly carried out, it would be a "boon" to the inhabitants of this or any other township, and would greatly promote the ends we have in view by the furtherance of public health.

J. O. MCGREGOR,
Medical Health Officer.

LENNOX AND ADDINGTON.

Fredericksburg Township.

CHAIRMAN AND SECRETARY'S REPORT.

We beg leave to report that the Municipal Council of North Fredericksburg, in compliance with the Act passed at the last session of the Legislative Assembly, regarding the sanitary conditions of the township, appointed a Local Board of Health, and at our first meeting we considered that it was not necessary to appoint a Sanitary Inspector. We also passed a resolution asking the medical men of the county to report to the Secretary all cases of Scarlet Fever, etc., that came to their notice, by which we found that there were a few cases of Scarlet Fever, none of which could be considered malignant. When we found any cases we notified the parties to make a thorough cleansing before they allowed themselves to mingle with the public, and by so doing it did not become infectious, none getting beyond the person first attacked.

IRVINE PARKS, Chairman.
P. R. McCABE, Secretary.

LINCOLN.

Gainsboro' Township.

SECRETARY'S REPORT.

In accordance with the provisions of *The Public Health Act*, I beg leave to submit the following report upon the work done by the Board and the sanitary condition of the township.

This Board having been organized but a short time, I will therefore have but little to report this year. At the meeting of the Board, on the 3rd November, complaint was made by S. G. Wiggins and James Wilson that A. McKeagen, J. W. Johnston and J. Jamieson, had deposited manure on the street in front of the public school in Wellandport. The Secretary was directed by a motion of Messrs. Roszel and Ginther, to notify the parties above named to remove the nuisance within eight days, which has been done.

As regards the sanitary condition of the township, I have to report that it is generally good. There is no epidemic disease prevailing at present.

S. KENNEDY,
Secretary.

WELLINGTON.

Garafraxa, West, Township.

SECRETARY'S REPORT.

From information received from the different parts of the municipality and from the Medical Health Officer, not having a Sanitary Inspector, I cannot give as correct a report as I would like to. Altogether the sanitary condition of the municipality is very good. Although having a full Board and a Medical Health Officer, there is not that interest manifested that there should be. The organization being new, there will no doubt be an improvement another year.

JAMES KENNEDY,
Secretary.

WENTWORTH.

Glanford Township.

SECRETARY'S REPORT.

In pursuance of section number 24 of *The Public Health Act of Ontario*, requiring the Secretary of the Board of Health to submit to such Board for adoption a report of the sanitary work done during the year, and of the sanitary condition of the municipality,

I beg, therefore, to report that very little sanitary work has been required to be done by the health officers of the municipality, for, as the requirements of *The Public Health Act* became known, they have been complied with generally so as to prevent coercion in the matter, and that, together with the fear of Cholera, has caused the people to take every precaution to prevent the introduction or spread of disease of any kind. As to the sanitary condition of the municipality, it has been exceedingly good during the year, there having been very little sickness, and no epidemic has prevailed until recently, when there have been a few cases of Typhoid Fever and Diphtheria. Some of the latter sickness have proved fatal.

THOMAS CHOATE,
Secretary.

HURON.

Goderich Township.

CHAIRMAN'S REPORT.

The Local Board of Health report as follows:—In June they visited the school-houses in the township (ten in number), and notified the trustees to attend to repairing the privies, and have them thoroughly cleaned out and keep them clean. Each school is well supplied with good water. These repairs have all been completed. The slaughter-houses were also visited, and the suggestions made complied with, and no offensive smell emanates from them. No complaint was made to any member of the Board regarding either a public nuisance or any on private property. No Health Officer was needed, and consequently none was appointed. The sanitary condition of the township is good. No large swamps exist, the natural drainage obviates this, the township being bound on the west by the lake with high banks, on the north-east by the River Maitland, and on the south-west by the Bayfield River. This gives superior drainage facilities. A large amount of under-draining is done, so that stagnant pools are unknown. The manure accumulating around barns and stables is removed by the month of June each year into summer fallows and root crops. There are many springs, and where these do not exist

wells from twenty to sixty feet deep are dug, so there is a plentiful supply of water, unless during a couple of months in a very dry summer. If any farmers are careless it is a very small minority, and these are being shamed into imitating their painstaking neighbours.

GABRIEL ELLIOTT,
Chairman.

LEEDS AND GRENVILLE.

Gower, South, Township.

CHAIRMAN'S REPORT.

I, the undersigned, Chairman of Local Board of Health of said township, report as follows :—

We met and organized, but as there was no epidemic of any kind and the matter was new to us, we thought best to give some study and thought of the subject with which we had to deal before taking further action thereon, and as there were no complaints of nuisances, and as we neither heard of nor saw any bad effects from the *nuisances** the Act is intended to guard us against, we took no further action on them. The health of the township has been good.

HUGH BOLTON,
Chairman.

HURON.

Grey Township.

SECRETARY'S REPORT.

I herewith have the honour to forward you a copy of the report of the sanitary condition of the municipality of the Township of Grey, in the County of Huron, for 1884 :—

A Local Board of Health has been appointed by the Municipal Council, in accordance with *The Public Health Act, 1884*.

The chief objects that have engaged its attention during the year were proper drainage from the cheese factories to carry away all the refuse whey, and the cleansing of all the public school yards, wells and privies within the municipality.

There is no Health Officer appointed.

By-law enforced relating to privy-pits. Wells, as far as I know, are not affected by excreta.

There have been four cases of Scarlet Fever and three of Diphtheria.

There is a by-law regarding isolation, which will be carried out if required.

WILLIAM SPENCE,
Secretary.

WELLINGTON.

Guelph Township.

SECRETARY'S REPORT.

In accordance with Section 24 of *The Public Health Act* of Ontario, and Section 3 of Schedule A, attached thereto, the Board of Health have to report that the members of the Board met on the 9th day of June in conformity with the Act, and organized.

* If there are nuisances, why not abate or destroy them, whether people complain or not. We know there are robbers in the community, but don't know whether or not they will rob us, but we want to leave nothing in their way.

The Board again met on the 21st of June, when a letter was submitted from Dr. Cowan, calling the attention of the Board to the terribly filthy state of a part of a house, the other portion being occupied by Mr. Pick, on Lot 7, 9th Concession, Division C., and the danger to Mr. Pick in consequence of living in such close proximity to so much filth, and that it might be the nucleus of some fell disease from which the whole neighbourhood might suffer.

The matter was referred to Mr. Watson to take what action he might deem necessary to have the nuisance removed, and in consequence of the owner of the premises being away and reported to be of unsound mind, he deemed it safest to have the premises cleaned at once, which was done at a cost of eight dollars.

The Board met on the 21st of September to consider a complaint from Mr. George Hirst, that the scavenger of the City of Guelph was in the habit of depositing the refuse, etc., which he collected in the city, in a field adjoining his residence, and he believed that both himself and family were suffering from its effects.

The Board, after considering the matter, instructed the Secretary to notify the scavenger and the owner of the property to have the nuisance removed within ten days.

On the 24th a letter was received from Mr. Hughes, stating that he considered he was acting under the city authorities, but would deposit no more soil on that ground, and would remove what was there complained of as soon as possible, which we believe has been done.

In connection with this case we believe it may be a serious matter for the city where they may deposit their soil, but it becomes far more serious for the township when they make it their nuisance ground.

The Board would also report that the general health of the township has been good; one case of Scarlet Fever of a very mild form was reported, and two cases of Typhoid Fever, informally reported, both of a mild type, are all the diseases that have come to the knowledge of the Board.

(Signed)

GEO. A. DARBY, Chairman.

A. McCORKINDALE, Secretary.

YORK.

Gwillinbury, East, Township.

CHAIRMAN'S REPORT.

The Local Board of Health respectfully report as follows: On the 28th day of June they held their first meeting, when Mr. Cody was elected Chairman. Subsequent meetings were held, when the appointment of John Salter and Nesfield Thirsh, as Sanitary Inspectors, was recommended to the Council.

A draft by-law providing for the amending and better adapting of the by-law appended to *The Public Health Act* to the requirements of this municipality, was adopted and reported to the Council, and passed by said Council, copies of which were distributed through the township.

As far as the Board is aware there are no cases or even symptoms of contagious diseases in the township at present. Three cases of Typhoid Fever have occurred during the year (though only one was reported upon by the attending physician), but the whole were successfully treated, the three patients having recovered.

BENJAMIN CODY,
Chairman.

 NORTHUMBERLAND AND DURHAM.
Township of Hamilton.

CHAIRMAN'S REPORT.

The necessary steps have been taken to administer the law, each member of the Board assuming his duty and proceeding to perform the duties required of him. Reports have been handed in from the different members of the Board that no disease of any contagious nature had been heard of in the municipality. The Board ordered the Secretary to procure the blank forms that the law directs, in such quantities as he might deem would be required, the cost of which will be paid out of the general funds of the corporation.

A. R. EAGLESON.

 HURON.
Hay Township.

SECRETARY'S REPORT.

In making this first Report of the sanitary condition of this township, I am happy to state that since the beginning of the present year we have been eminently free from all infectious diseases of a bad type. That since the Board of Health was organized in May, we have had none whatever. During February and March, and part of April, the Measles were quite prevalent throughout the township, a number of schools having been closed in consequence. The disease was confined in nearly all cases to young people. No deaths occurred. There have been no cases of Scarlet Fever under treatment of physicians in the township. About the usual number of cases of Whooping-Cough, and a few have been treated for Diphtheria of a very mild type.

Not a single case of Small-pox has been reported, and but three or four cases of Typhoid Fever, one only resulting fatally; these all occurred before the Board of Health was organized, and in all the above cases the usual disinfectants have been strictly enforced.

The Board of Health in our township, as now constituted, seems to be alive to the importance of strictly carrying out the provisions of *The Public Health Act* of Ontario. As yet we have appointed no Sanitary Inspector, as his services so far seemed unnecessary, two of the resident physicians of the township being members of the Board.

SAMUEL FOSTER,
Secretary.

 PERTH.
Hibbert Township.

SECRETARY'S REPORT.

Although a Local Board of Health was established in the Township of Hibbert, I have nothing to report, the Board having done no more than merely organize. The health of the township was never better, so that there was no urgency on the part of the Board to make any official interference with the ordinary habits of the people.

T. CARROLL,
Secretary.

NORFOLK.

Houghton Township.

CHAIRMAN'S REPORT.

Pursuant to Section 3 of Schedule A of *The Public Health Act of 1884*, it becomes my duty, as Chairman of the Local Board of Health for the Township of Houghton for the current year, to report to your honourable body the work of the Board during the period of its existence.

The organization of the Board took place on the 9th day of June last, when I was elected Chairman, George Bundy acting as Secretary, in conformity with the Act.

Nothing regarding the sanitary condition of the township or other matters requiring the attention of the Board having been brought before their notice, the Board adjourned, to meet again the 8th day of October.

The members of the Board at this second meeting took into consideration the necessity of the appointment of a Sanitary Inspector. It was fully discussed, and a resolution passed to the effect that in consequence of the absence of any contagious disease, it was considered unnecessary to appoint said officer.

One case of Typhoid Fever has been reported, but the directions of the attending physician having been complied with, the patient recovered and other cases were prevented.

About the 1st of November, a letter was received by the secretary that there were some cases of Diphtheria in the north-western part of the township. The members of the Board in that neighbourhood visited the families to learn the particulars. They found three cases which the medical attendant pronounced Diphtheria, and some other cases of sore throat which were considered doubtful.

The directions as to isolation having been observed, the patients at last accounts were recovering, and no new cases reported.

MOSES W. WHITE,
Chairman.

HURON.

Howick Township.

SECRETARY'S REPORT.

Mr. James Agnew complained of the condition of out-houses in rear of the brick block, Gorrie. The same was put in proper condition at the owner's expense, on being notified by me.

Mr. Robert Mahood notified the Secretary of a complaint against D. D. Cox of Newbridge, for having his hog-pen in an improper place. The same was removed by Mr. Cox on notice from me.

Complaint was made of the sanitary condition of the Fordwich school grounds and well. The committee appointed to examine the same reported that the trustees had to put well, etc., in proper order.

There were three cases of Typhoid Fever during the summer; one died and the other two recovered. Means were employed as follows to prevent disease from spreading: Discharges from bowels passed into carbolic solution, carbolic and tincture of iodine allowed to evaporate in room, and bed clothes and soiled linen soaked in a solution of carbolic acid when removed from patients, then washed.

The sanitary condition of the municipality appears to be very favourable at present. There is no Medical Health Officer.

WILLIAM DANE,
Secretary.

Hullett Township.

SECRETARY'S REPORT.

In submitting to you our first Annual Report, I have the honour to state that, in June, 1884, our first Board of Health was duly organized. John McMillan was appointed Chairman, and Oliver Young of Landesboro', Physician, was appointed Medical Health Officer. There was no other business done by said Board during said year of 1884, and I believe that the sanitary condition of this township was during said year and now is good. I beg also to submit to you the annual reports of our Medical Health Officer and our Chairman, as under:—

I beg leave to report to your honourable body that the state of health in the Township of Hullett at the present time is in all respects favourable, and we are exempt from contagious diseases generally.

DR. O. YOUNG,
Medical Health Officer.

As Chairman of the Board of Health, I have to report to your honourable body that we have only had one complaint of any nuisance in the township, which was respecting a slaughter-house adjoining the Town of Clinton. Before calling the Board together I wrote to both the owner and occupant of the premises complained of, and the nuisance has been abated as far as I am aware. This is all the work performed by the Board. I must congratulate you upon the healthy condition reported by the Medical Health Officer to the Board of Health, whose report is laid on the table with this.

JOHN McMILLAN,
Chairman.

P.S.—I have also to report that there was only one meeting of the Board. Hoping your honourable body will make such provision as in your wisdom you see fit for remuneration for services.

J. McM.

There has been no meeting of our Board since June last. I have, therefore, had no opportunity of submitting this report for adoption, as provided in the 24th Section of *The Public Health Act of 1884*.

JAS. BRAITHWAITE,
Secretary.

—
BRUCE.

Township of Huron.

SECRETARY'S REPORT.

The Local Board of Health for this township was duly organized on the 16th day of June, 1884, and appointed Thomas Moore Health Inspector. He visited two cheese factories and recommended a better system of sewerage, which was duly carried out, and removed other nuisances which he found on the roads and commons of this municipality; also, caused privies and vaults in the Village of Ripley to be cleaned and disinfected. The health of this municipality is reported good, no epidemic disease existing therein, only three or four cases of fever occurring during the summer.

ROBERT MONTGOMERY,
Secretary.

SIMCOE.

Innisfil Township.

SECRETARY'S REPORT.

I have the honour to inform you that the report of the local Board of Health is very satisfactory, and the township is healthy, so much so that there is no contagious disease.

CHARLES PALLING,
Secretary.

LENNOX AND ADDINGTON.

Townships of Kaladar, Anglesea, and Epping.

SECRETARY'S REPORT.

I would have made a report of our local Board of Health before, but owing to the general good health in this part of the country, we did not wish to make any great expense on the municipality.

Since the epidemic of Small-pox, however, we have been vigilant and on the look-out. On the 6th inst. the Board met to consider a case of a desperate act of one who ran away from the Small-pox hospital at Stoco without bearing a certificate of being disinfected. We have placed a strict watch over him and the family to keep them isolated. A great number of people are getting vaccinated by a doctor, whilst one out of ten only proves effectual. People are intending to practice themselves to vaccinate the rest of their family. What will be the result if the public resort to vaccinating among themselves, using matter from persons probably whose health is quite objectionable? This is not suggesting the matter, but they are facts which will soon be brought into practice. If vaccination is a prophylactic against that loathsome disease, and the Government* alert in the interests of the public health, why then so negligent in this most important part to prevent that disease?

So far the Small-pox is under control, but it is extremely dangerous in these back countries; the shanties all crowded with men, teams continually going back and forward, causing great anxiety in general.

O. M. ROLUFS,
Secretary.

GREY.

Keppel Township.

SECRETARY'S REPORT.

In reply to yours of the 21st ult., I have to say that the Board of Health for the Township of Keppel organized, but it being a newly settled township, with no large villages, it was not thought prudent to meet again till there might be some necessity for a meeting. There has not yet been any apparent reason to meet, so we have nothing to report.

JAMES SMITH,
Secretary.

*If the Clerk reads the Act carefully over, he will find that the Government have made provisions regarding vaccination, and it depends on the local Boards whether these provisions are carried out or otherwise.

FRONTENAC.

Township of Kingston.

SECRETARY'S REPORT.

I have to report that in accordance with the provisions of *The Public Health Act*, the Township Council appointed a Board of Health, but owing to the absence of disease in this locality of any contagious kind, and the general healthy condition of the inhabitants, there has been nothing further done. It is reported that Small-pox has broken out about 35 miles north-west of this place. What precautions are necessary under the circumstances? Where can a supply of vaccine be obtained? What authority have township councils to establish local quarantine? What steps should be taken to establish a quarantine? The Board of Health will appoint a Medical Health Officer at its next meeting.

JNO. SIMPSON,
Secretary.

MIDDLESEX.

Township of Lobo.

SECRETARY'S REPORT.

That the Municipal Council of the Township of Lobo manifested a ready acquiescence with the several enactments of the Public Health Act by the appointment, at the May meeting, of three members, namely: Messrs. Alex. Campbell, Archibald Sinclair, and Peter L. Graham, M.D., who, with the Reeve and Clerk, compose the Board of Health for the Township of Lobo.

The Board, thus organized, held its first meeting in the Town Hall, Lobo, on the 9th of June, 1884, when the Reeve was duly elected Chairman of the Board. The Secretary was instructed to provide a minute book for the use of the Board.

The Board considered it unnecessary to appoint any Medical Health Officer at present, as one member of the Board is a medical practitioner, and the sanitary condition of the Township of Lobo is very good.

The Board has held several meetings since organized, but no cases of contagious diseases have been reported to the Board, although the Board discovered a few mild cases of fevers and inspected them, they being very few, and nothing serious.

E. R. BARCLAY,
Secretary.

London Township.

SECRETARY'S REPORT.

In accordance with the requirements of section 24 of *The Public Health Act, 1884*, I have prepared the following report of the sanitary work done by the said Board since its organization, and of the sanitary condition of the said municipality for your consideration.

The first meeting of the Board was held in the Town Hall, St. Johns, on Monday, May 19th, 1884. Peter Elson, Esq., Reeve of the township, was appointed Chairman. The Secretary was instructed to get 200 blank forms for medical practitioners printed. Board adjourned.

Board met June 26th, 1884. A complaint regarding the shed of Edwin Brooks was referred to the Medical Health Officer. The Secretary was instructed to get 200 cards

printed, in accordance with rule 4 of section 17 of Schedule A, appended to *The Public Health Act, 1884*, and 100 copies of said Schedule (as amended by by-law of Municipal Council) printed for distribution.

Board met July 15th, 1884. Licenses were granted to twenty six slaughter-houses and seven cheese-factories, which had been personally inspected by the Sanitary Inspector and reported favourably upon by him. The Inspector was instructed to inspect a nuisance complained of as existing on lot 18, concession 2, and any other premises complained of, under directions of the Medical Health Officer, pending the meeting of the Board, which adjourned to meet on the call of the Chairman.

A meeting of the Board was held in the County Buildings, London, on Saturday, October 11th, having been called by the Chairman for the purpose of considering a petition signed by R. Thompson and others complaining that the water works' dam on the river Thames, dividing the Township of London from the Township of Westminster, was a public nuisance and dangerous to the public health, and praying that steps be taken for the removal of the same.

The Sanitary Inspector read a report prepared by him after personally investigating the alleged nuisance, and interviewing the greater number of the persons living near the banks of the said river, in the Township of London. Dr. Bice, Medical Health Officer, addressed the Board, stating that in his opinion the cases of sickness spoken of in the report of the Inspector were not caused by the water works' dam, and that if any diseases were caused by the same, they would be Typhoid Fever, Diphtheria, or similar diseases, of which there were no cases reported.

It was then moved by T. A. Langford, seconded by E. Robinson, and resolved :— That this Board take no action in the matter. Board adjourned.

The sanitary condition of the township has been during the summer and fall very good. This will be more fully treated of in the report of the Medical Health Officer presented herewith.

JAMES GRANT,
Secretary.

MEDICAL HEALTH OFFICER'S REPORT.

After the proper organization of the Board, cards, on which were printed the names of the different contagious diseases mentioned in the Act, were sent to each of the resident physicians of the township, but up to date not a single case of any of the above-mentioned diseases has been reported. I am therefore led to conclude that either our township has been peculiarly exempt, or there has been gross carelessness on the part of my medical brethren. I have not had anything of the kind to look after, and possibly my medical friends have been similarly favoured. Complaint was made some time during the summer of the sanitary condition of Carling's Creek. It was supposed to be the immediate cause of Typhoid Fever in London East. Our worthy Inspector and I made a visit to that locality, and found that there was considerable cause for complaint. The filth from pig-pens and slaughter-houses impregnated the waters of that stream, rendering it certainly unfit for use, and possibly a source of mischief in the production of Typhoid; but the remedy would involve considerable expenditure, and consequently we concluded to memorialize the Provincial Board on the subject. We have taken action in two or three cases of nuisances, such as pig-pens, unwholesome smells, foul drinking water, etc., in all of which we have found but little trouble in enforcing the law. Our Inspector visited all the slaughter-houses and cheese-factories in the township, and found them quite up to the requirements of our modification of schedule A. From our recent organization, and from the fact that most contagious diseases occur during the winter months, I did not expect or look for a voluminous report to present to the Sanitary Board at this season of the year.

M. BICE, M. D.,
Medical Health Officer.

WELLINGTON.

Luther East Township.

SECRETARY'S REPORT.

Our Board has not yet got thoroughly into working order, and, being something new, we were at a loss as to how to proceed about business ; but we expect to be able to attend to matters connected with the sanitary interests of the township more thoroughly in future. In the Village of Luther, which is in this township—East Luther—there have been a great many cases of Typhoid Fever within the past five or six years, generally a few cases every fall, and three years ago there were as many as ten deaths, besides a number of other cases that recovered. We had three cases last fall, but no death, and the doctors seem to be puzzled to know the cause.

I hope you will find the above satisfactory.

R. E. HAMILTON,
Township Clerk.

MUSKOKA AND PARRY SOUND.

Township of Macaulay.

SECRETARY'S REPORT.

Annual report of the Local Board of Health of the Township of Macaulay for the year 1884 :—

The removing of two slaughter-houses, and the disinfection of the old sites, and the cleansing and disinfection of the new slaughter-houses ; also, the examination of the Free Methodist burial ground by the Medical Health Officer, and the said officer ordered the removal of the corpses, as the said ground was in too close proximity to a creek used for domestic purposes. The Board has also ordered the Medical Health Officer to vaccinate all the children of the township. No Sanitary Inspector appointed, but Dr. Shaw is our Medical Health Officer.

WILLIAM GOHM,
Secretary.

ESSEX.

Malden Township.

SECRETARY'S REPORT.

In conformity with your request, contained in your circular of the 21st October, I have to report that owing to the generally healthy state of the Township of Malden for this year, the Local Board has very little to report on.

The Council repealed the by-law appended to the *Health Act*, as they considered many of its provisions unpractical and difficult to enforce in a rural municipality, and decided to be governed by the provisions of the Act itself, in the case of diseases breaking out in the township.

The Local Board was organized on the 9th June last, and appointed the Reeve Chairman thereof. Two meetings were held during or up to this time.

No Medical Health Officer was appointed. The township was divided into five sections, each section under the supervision of a member of the Board.

Since the Board was organized there was one death from Scarlet Fever, the only case in the township ; every precaution was taken to prevent the spread of the disease by all parties interested. Two cases of Typhoid Fever of a mild type also occurred, but the parties are recovering. These three cases were the only cases of contagious diseases known to have taken place in the township.

In view of the threatened danger of the Cholera reaching us next year, the Board contemplates organizing a more complete plan of work for another year.

HENRY BOTSFORD,
Secretary.

Maidstone Township.

SECRETARY'S REPORT.

The Board of Health for the Township of Maidstone have nothing to report. The sanitary condition of the township was such that no contagious diseases have broken out, and the Local Board of Health had nothing to do in connection with their office ; therefore I am instructed by the Chairman to report as above.

T. F. KANE,
Secretary.

NORTHUMBERLAND AND DURHAM.

Manvers Township.

CHAIRMAN'S REPORT.

The Local Board of Health of the Township of Manvers beg leave to report that they met and organized, as directed by statute, and they have much pleasure in stating that the inhabitants of this township during the past year have been blessed with general good health, being as far as known to us comparatively free from Diphtheria, Typhoid, Consumption, and all other infectious diseases.

That while any of such cases that they have been cognizant of cannot, in their opinion, be traced to defective drainage, etc., this Board is of opinion that in view of the probability of Cholera visiting this continent during the ensuing season, and the fact of Small-pox being in the County of Hastings, that too much care cannot be taken to keep such diseases from our midst, or in case such may be introduced to take such measures as they may from time to time think proper or be advised by the Provincial Board of Health.

That it would in their opinion be advisable for the Council to have printed a sufficient quantity of the by-law as recited in the Statute of Ontario respecting public health, and cause one of such copies to be left at every house in this township by the assessor when performing his other duties, as this Board are satisfied that very few of the inhabitants are aware of the duties required of them by such by-law, while the majority do not know that such a law is in existence.

That this Board are happy to say that no complaints respecting any matter connected with the public health have been made to them during the present year.

That the sum of twenty dollars will be required to be granted to this Board to defray the expenses thereof for the current year.

W. R. PARKER, Chairman.
ALFRED RYLEY, Secretary.

YORK.

Township of Markham.

SECRETARY'S REPORT.

The work of our Board has been very light during the year owing no doubt to the fact that there has been no contagious diseases reported, as required under the Act in that behalf.

There was only one complaint lodged as to any place being in so unsanitary a condition as to render it a nuisance

Upon these facts the Chairman did not think it necessary to call the Board together

but twice during the year for the purpose of disposing of the above mentioned complaint, the Secretary having called a previous meeting for the purpose of organization.

The complaint laid was against a butcher residing at the Village of Thornhill, who occupied a slaughter-house and had an apparatus for rendering fat, and also a pig-pen adjoining, causing a very bad stench. The Board dealt promptly with the matter, instructing the Medical Health Officer and the Sanitary Inspector to at once examine the premises, and if a nuisance was found to exist to have it removed forthwith, which the said officers with diligence carried out, after some difficulty, to a satisfactory conclusion, as will appear from their reports forwarded herewith.

The Board congratulate themselves upon the sanitary condition of the municipality, and are pleased that their public health matters have cost them so little either in time or money.

JOHN STEPHENSON,
Secretary.

MEDICAL HEALTH OFFICER'S REPORT.

In my first annual report, allow me to congratulate this municipality upon the efficient Council which took such opportune steps in the formation of the Board of Health.

Former experience has taught the value of health committees for the prevention of the spread of contagious diseases, and if this Board shows due vigilance and enthusiasm it cannot but stimulate confidence and emulation on the part of the people, who are the benefited.

In rural districts we do not have to face in a great degree the baneful effects of deficient sewage and want of good drinking water, but in the disposal of garbage, etc., we are subjected to the same influences as people in cities and towns.

In the erection and arrangement of rural dwellings, I beg to point out that more attention should be paid to the following points:

1. Greater size of the rooms, with ample means of ventilation.
2. Greater distance between the privies and water supply.
3. Thorough drainage to lessen the subsoil dampness, which increases warmth and healthfulness.
4. If there must be a garbage pile, to have it at a safe distance from the dwelling, and removed at stated intervals.

In the matter of prevention of the spread of contagious diseases, a potent factor is the power of head masters in schools; and I would recommend that the attention of school teachers be called to the school law which enacts that "the masters of every school shall see that no pupil is admitted to or continues in any of the schools who is affected with or has been exposed to any contagious disease, until all danger of contagion from such pupil or from the disease or exposure shall have passed away, as certified in writing by a medical man."

In rural places no one perhaps is more cognizant of the prevalence of disease than the school teachers, and by their co-operation (which is compulsory), much may be done to prevent their spread.

I am pleased to state that no cases of contagious or infectious diseases have been reported during my term of office, which goes to prove either the excellent sanitary condition of the municipality, or gross negligence on the part of those who should report—the former being evidently the factor.

In one instance only have we been called upon to insist that sanitary matters should be improved upon. I refer to the slaughter-house in Thornhill, owned by Mr. Muldoon. After inspection, both by the sanitary officer and myself, we have for the time being, I hope, arranged matters satisfactorily and amicably to those directly interested, and for the general benefit of the public health.

In closing this report I wish to draw attention to the efficient aid and substantial services rendered by our Secretary, Mr. J. Stephenson, upon whom much of the arduous duties have fallen.

W. E. HAMILL, M.D.,
Medical Health Officer.

HASTINGS.

Mayo and Carlow Townships.

SECRETARY'S REPORT.

As to the business of the past year, your Local Board of Health cannot report any action so worthy and meritorious as to draw from your honourable Board exclamations of satisfaction and joy. Pursuant to Section 18 of *The Public Health Act* of 1884, a meeting was called for Monday, the 26th of May, 1884; but for different reasons, some of them good enough, it was a failure—the only one present being your obedient servant, the Secretary. There seems to be considerable difficulty in maintaining any organization which connects these two townships unless its members are thoroughly alive to its necessity, partly on account of the length of road necessary to be travelled on account of the rough mountainous ridges that traverse different parts of both; in one instance two of the members of our Board live about thirty miles apart.

JOHN BREMNER,
Secretary.

MUSKOKA AND PARRY SOUND.

Medora Township.

SECRETARY'S REPORT.

In making a report for the Municipality of Medora and Wood I beg to say: That we have no Medical Officer on this Board, in fact there is no medical man residing within a convenient distance.

That there has been only one case of an infectious disease in this municipality during the year, viz., a case of so-called Typhoid Fever, combined with Pneumonia, and as it seems no steps were taken to isolate the case the fact of its being fever may be doubted.

I believe, as to the disposal of sewage, it seems usual throughout these townships to have pits and to cover with soil. As far as could be found, in no case was sewage allowed to flow into the lakes.

I am sorry to say that small interest is taken in the Board itself, only one member attending its meetings. The feeling of the people seem to be that a Board of Health is not necessary here, but if not out of place I would suggest that some provision be made for paying members' travelling expenses, time, etc., as they have to spend a good deal to attend meetings.

HENRY O. GUY,
Secretary.

ESSEX.

Mersea Township.

SECRETARY'S REPORT.

The Local Board of Health for the Township of Mersea, in presenting their first annual report on the sanitary condition of the municipality, beg to say that although under the requirements of *The Public Health Act* a Board has been formed, it cannot be claimed that it has been actively engaged in matters relating to the public health, inas-

much as there have been no extraordinary diseases in the township during the present year.

No Health Officer has thus far been engaged. The Village of Leamington, which, before its incorporation, formed part of the Township of Mersea, has five medical practitioners, one of whom has been appointed by the said Corporation of Leamington as Health Officer for that place, and this gentleman—Dr. Charles Chamberlain—has kindly permitted this Board to state that he intends in his report to include the Township of Mersea.

The population of this municipality being, with the exception of the small Village of Wheatley, in the extreme eastern corner of the township, strictly an agricultural population, the questions required to be answered, as contained on page 148 of the second annual report of the Provincial Board of Health, cannot, therefore, properly be complied with.

It would perhaps not be out of place to state that the Township of Mersea has a very large and effectual drainage, there being no less than about twenty large tap-drains constructed within its limits, some of these discharging into Lake Erie and some into Lake St. Clair, through the adjoining Townships of Tilbury West and Rochester.

There have, however, been a few cases of Enteric Fever in the southern part of the township in the immediate vicinity of the Village of Leamington, and two deaths occurred during last week, but excepting these the Board have no knowledge of any diseases in the township.

Should any epidemic arise in the Township of Mersea the Board will ever be mindful of the duties devolving upon it, and take such precautions and make such provisions as will tend to the preservation of the general health of the people.

N. ROLFSON,
Secretary.

MIDDLESEX.

Metcalf Township.

SECRETARY'S REPORT.

The undersigned, in compliance with the requirements of *The Public Health Act* 1884, begs leave to report as follows:—

That the Municipal Council of the Township of Metcalfe did, on the 5th day of May, 1884, appoint John Trueman, Richard Henery and Peter Campbell, who, with the Reeve, Henry Gough, and John Hutton, Clerk, acting as Secretary, composed the Board for the said township for the year 1884.

The Council also appointed Alexander Nixon, M.D., Medical Health Officer, to be paid at the rate of four dollars per day when employed by the Board of Health.

The Board held its first meeting at the Town Hall, in the Village of Napier, on the 19th day of May, 1884, when John Trueman was duly elected Chairman of the Board.

The Board visited the different cheese factories in the township (four in number), and made a thorough examination of each, and, as a whole, found everything satisfactory.

The Board also held meetings in the months of July and November, deeming it not necessary to hold meetings monthly, and thus have to add to the expenditure of the municipality.

The Board did not appoint an Inspector, deeming it not necessary to do so, as no sickness of any importance was heard of in the municipality; and, as the Board did not employ the Medical Health Officer during any part of the year, consequently no report from that officer has been received.

JOHN TRUEMAN, Chairman.
JOHN HUTTON, Secretary.

 NORFOLK.
Middlesex Township.

SECRETARY'S REPORT.

No sickness of a contagious character in the township, and so far as I know it is in a very good sanitary condition, which the Local Board of Health will endeavour to maintain.

J. C. H. HERRON,
Secretary.

 WELLINGTON.
Minto Township.

Owing to the sanitary condition of the Township of Minto being so good, it has not been necessary to take any extra precautions for the prevention of disease during this present year; the owners of the two slaughter-houses and the cheese factory, who obtained permission from this Board to use such buildings in carrying on their respective callings, seemingly have kept their premises in a proper manner, and no complaints of any kind have been made so far.

One of the great proofs of the healthy condition of this district is, that the number of deaths registered at the clerk's office for the present year is far below the average.

JOHN DARROCH,
Chairman.

 MEDICAL HEALTH OFFICER'S REPORT.

In presenting my first annual report, as Medical Health Officer and Sanitary Inspector, I must congratulate you upon the excellent sanitary conditions existing in the township. It is true that during the past season there has been an unusual freedom from epidemic and contagious diseases, not due to any special precautions on the part of the Board or its officers, but which has been noticeable throughout most of the Province. Nevertheless, an endeavour has been made to comply with the provisions of the Public Health Act as far as it was possible to do so, and I have no doubt if there had been any marked violations of sanitary laws, endangering public health, energetic measures would have been taken to prevent them.

Under the circumstances I did not deem an extended inspection necessary, and therefore made none; but I visited the slaughter-houses within the municipality and found them kept on the whole very satisfactory. I did not consider that their condition was such as to impair the health of persons residing in their vicinity.

In conclusion, I am happy to be able to state that I am not aware of the existence of any remediable unsanitary condition in the township to which I could draw your attention.

W. A. HARVEY, M.D.,
Medical Health Officer.

 PERTH.
Township of Mornington.

SECRETARY'S REPORT.

The Council of the Township of Mornington, on the 6th day of May, 1884, in accordance with the Public Health Act of 1884, appointed Mr. Jacob Kollman, Mr. Thos. Magwood and Mr. Thomas Armstrong, with the Reeve and Clerk, a Board of Health for

the Township of Mornington, and the same evening they met in the Village of Millbank on account of a son of Mr. Peter Livingston in that locality having the small-pox. Mr. Kollman was appointed chairman. The Board appointed Mr. James Magwood to go three times each day to two houses where the family lived and receive orders for anything they wanted, and the Secretary was authorized to have a notice put up at Livingston's gate, and to notify the Livingstons and a young man who had been with young Livingston's brother when he died, not to leave the premises where they resided until they had a certificate from a doctor that they were clear from any infection. I am sorry to have to report that young Livingston died with it, but no others took it, and I think there is no danger from it now. There have been some cases of typhoid fever in the township; none but one has proved fatal, and that was a young man who worked in a cheese factory in the Township of Maryborough, and took the typhoid fever there and was brought home and died. I do not know of any infectious disease in the township at present. The Council have not appointed any Medical Health Officer or Sanitary Inspector. This report, therefore, cannot include the report of the Medical Health Officer.

JOHN WATSON,
Secretary.

MUSKOKA AND PARRY SOUND.

Morrison Township.

CHAIRMAN'S REPORT.

The Local Board of Health elected by the Municipal Council, met according to the instructions of *The Act of Public Health* and organized.

The Act was read and every clause was discussed. The members were instructed how to proceed if any contagious disease made its appearance.

We did not appoint a Medical Officer or Sanitary Inspector, for we could not see any urgent necessity for them, and our finances would not allow us by any means to do so.

This township is small, and only one-third of this small area is settled, and the settlers living a good distance each from the other.

Our Muskoka highlands are very healthy, a salubrious bracing air and pure water must necessarily make it so, and our settlers, mostly immigrants from the old countries, are well educated and fully aware of the benevolent intent of the *Act of Public Health*, and also of its beneficial working, and will do all that is required to make it effective.

At our last meeting (November 18th) the report of the Secretary was read and adopted, and afterwards discussed at length.

The members intend to call meetings during the winter in their respective districts, and read and explain the Act to the people.

A. WIANAKO,
Chairman.

McDougall Township.

CHAIRMAN'S REPORT.

I have the honour of presenting to you the report of the Board of Health of this township.

Since the appointment of the Board thirteen nuisances dangerous to the public health, namely, three slaughter-houses and ten water-closets and cesspools in a very foul state have been removed, the same having been cleansed and disinfected and everything is being done to carry out the Act.

J. FARRER,
Chairman.

MEDICAL HEALTH OFFICER'S REPORT.

This, my first report of the sanitary condition of Parry Sound, must of necessity be brief, for since my appointment as Medical Health Officer, I am pleased to say that epidemics have been entirely unknown to us, and in fact I have been unable to trace a single case of sickness to a want of proper sanitary precautions. And now that we have an active and efficient Board of Health, I think we may rest in comparative security from the invasion of epidemic and contagious diseases arising from bad sanitary conditions, or if we are so unfortunate as to be visited by an epidemic we will at least feel certain that everything it is possible to do to prevent its spread will be done. But I hope you will not infer from this that there is nothing for you to do, or that our sanitary condition is perfect, for such is by no means the case; for although my attention has not yet been called to any violation of the sanitary laws, yet when I think that there are about three or four hundred privies in our village and almost an equal number of wells that the water cannot escape contamination to a greater or less degree, and I cannot too strongly condemn this method of disposing of the excreta, especially when the water supply is wholly from wells, and I hope before long that we will be able to dispense with privies altogether, and have instead the ash closet, which I think could be managed at a trifling cost, and thus avoid all further risk from that source. Before closing my report, or rather apology for a report, I wish to express my approval of the prompt action taken by the Board of Health in attending to the sanitary condition of the slaughter-houses, and also to the removal of excreta and many other things they have promptly attended to. I also wish to congratulate the people of Parry Sound on the erection of such a handsome and much needed school-house, for besides being a large, commodious, well-ventilated building, it is a credit to our village and a place where children may be sent without endangering their health, and where their minds may be more readily cultivated.

GEORGE FIERHELLER, M.D.,
Medical Health Officer.

MIDDLESEX.

Township of McGillivray.

SECRETARY'S REPORT.

The Municipal Council has appointed neither a Medical Health Officer nor a Sanitary Inspector, and under these circumstances what is the duty of the Board?

No places detrimental to the health of the inhabitants in any district of this municipality have been reported to this Board, nor have any infectious diseases been prevalent in any part thereof.

By section 28 of *Public Health Act*, is it expected that the whole of the municipality is to be minutely inspected, or merely to be inspected if any nuisance is reported to exist?

This Board desires to make as complete a report as far as their knowledge extends, and are anxious to comply with the requirements of the Act to the best of their ability, and any suggestions you will send them will be thankfully received.

WILLIAM FRASER,
Secretary.

MUSKOKA AND PARRY SOUND.

Township of McKellar.

In reply to your circular of October 20th, I have the honour to report that the Local Board of Health for the Township of McKellar for 1884 started with a well defined

policy of doing nothing, and up to the present time every member has carried the policy out to the fullest extent possible. I have not succeeded in getting the members together to select a chairman.

G. B. LEE,
Local Board of Health.

Townships of McLean and Muskoka.

SANITARY INSPECTOR'S REPORT.

According to orders received from the local Board of Health, in August, 1884, I inspected every house and yard in the hamlet of Bayville. I recommended every one to use sulphate of iron for privies, chloride of lime and carbolic acid for rooms, cellars, and yards. In the house occupied by Henry Budd, I found four sick with low fever, and destitute of proper food. The house and premises emitted a stench day and night. As there was danger of Typhoid fever, I had the family removed and supplied with proper necessities. They are now well.

ANDREW SLEMMONT,
Sanitary Inspector.

RENFREW.

McNab Township.

SECRETARY'S REPORT.

In accordance with the requirements of the "Public Health Act, 1884," I beg to report,

1. *As to the work done.*—I have procured a minute book for the Board, and I have got a supply of bills or cards printed, as required by rule 4, of section 17, of schedule A to the said Act. About the 30th of October last, I was informed by Dr. Ward, of Arnprior, that Diphtheria was in three houses in the village of Braeside. I immediately went there and posted notices on the houses in which the disease was, and told the people to leave the notices up until the physician told them to take them down.

The above is a brief statement of the work done since the Board was formed.

2. *As to the sanitary condition of the Municipality.*—I have to report that, so far as I know, it is excellent, and has been so ever since the formation of the Board. The only cause of alarm was the cases of Diphtheria mentioned above—and only one of them was considered to be a serious case—and I received no hint that its appearance was considered due to any local cause whatever.

A. HAMILTON,
Secretary.

WELLINGTON.

Nichol Township.

SECRETARY'S REPORT.

In compliance with your circular of the 21st October last, I have the honour to transmit the following report of the proceedings of the local Board of Health, in this municipality, during the current year :—A meeting of the Board, at which all the members were present, was held on the 9th of June, being the second Monday after the members who were not members *ex officio*, were appointed; at this meeting it was considered inexpedient and unnecessary (at that time, at least) to appoint a Medical

Health Officer or a Sanitary Inspector for the municipality, but resolved that each member of the Board should respectively endeavour to ascertain the sanitary condition of his locality, and endeavour to have any nuisances removed which might be considered dangerous to the public health, and that the chairman should call a meeting of the Board, if any emergency should at any time occur, when he might consider it necessary to do so. As the general health during the past summer, in this locality, has been very good—no epidemic of any kind having prevailed, no special meeting was called. The chairman called an ordinary meeting of the Board to be held on the 25th inst., in order that the Annual Report be prepared for transmission. All the members attended and reported favourably of the general health prevailing in all parts of the municipality. The questions found on page 148 of the second Annual Report of the Provincial Board of Health were duly considered, and the answers to the said queries decided on, and the secretary instructed to transmit them to the Provincial Board at Toronto. I have, therefore, in accordance with such instructions, transcribed the answers agreed upon according to their respective numbers on the next pages.

JAMES McQUEEN,
Secretary.

—
OXFORD.

East Nissouri Township.

SECRETARY'S REPORT.

Our municipality being an entirely rural one, we are free from the evils of overcrowding, and it is the interest, as well as the duty, of all our neighbours to do their best to preserve the health of their several households. We fully recognize and appreciate the benefits likely to accrue from the establishment of Boards of Health, both local and provincial, and will be at all times prepared to take the necessary pains to attend to all matters appertaining to the public health within the limits of our municipality, and to do our duty so far as we understand it. We feel greatly the need of a supply of printed matter, consisting of short essays on the various branches of hygiene which should be treated in a popular manner, for general distribution, and would suggest that such essays should be printed under the direction of the Provincial Board, and furnished in liberal quantities to local boards, with request to the secretaries to distribute the same to leading men in their several municipalities. We feel that no money can be more profitably employed than in thus promoting the enlightenment and improving the health of the community. We observe with pleasure that a very considerable amount of tile-draining is being done in this section, and although done entirely for agricultural reasons, it must undoubtedly prove very beneficial hygienically. In conclusion I would say that we have had every reason to be thankful for the very good state of public health that has been enjoyed during the present year, including an almost complete exemption from contagious, epidemic, or endemic diseases within the limits of this municipality.

CHAS. R. COMMANDER,
Secretary.

—
GREY.

Normanby Township.

SECRETARY'S REPORT.

We have a local Board of Health, and it is actively engaged in matters relating to the public health. Peter McLean, M.D., (as previously reported) is the appointed Health Officer. He is not a salaried official.

Several complaints against nuisances were received and investigated by the Board. Nuisances had to be abated or removed. Privy-pits are generally employed in the disposal of excreta, which is often removed on account of its value as manure for the farm. Privies in the country are not much frequented, and always a good distance from wells, situated so that no disease can be traced to their presence. The chief source of our water supply is clear springs and wells, and such supply is not affected by excreta and other refuse, by pollution of streams and rivers, or privy-pits and soil pollution. Stagnant water exists to a very small extent. No cases of disease from contamination of drinking water came under our observation. Our Medical Health Officer reports as follows: "There have been no epidemics in this township this year. We have had no Small-pox, Scarlet Fever, Measles, Diphtheria, Whooping-Cough, or Typhoid Fever."

GEORGE HOPF,
Secretary.

OXFORD.

Norwich South Township.

SECRETARY'S REPORT.

In accordance with Section 24 of *The Public Health Act of 1884*, I beg to lay before the Board for its consideration the following report:

There has been received from the Provincial Board of Health its second report, also circulars, letters, etc., urging upon the Local Boards of Health the necessity of carrying out the provisions of the said Act. The Local Board of Health for this municipality has only had one complaint of a nuisance, which was occasioned by stagnant water in the village of Otterville. The party owning the property when notified of the nuisance had it removed forthwith.

I would beg to state for your information that the health of the public generally has been good for this year. The number of deaths registered in the municipality has averaged forty-five each year for the last four years. For this year up to date, the number registered has been twenty-five.

JOHN COOPER,
Secretary.

CHAIRMAN'S REPORT.

In the discharge of my duties as Chairman of the Local Board of Health for this municipality, as prescribed in Schedule A, Section 69, of *The Public Health Act of 1884*, I present for your consideration this, my first annual statement of the work done by the Board during the year, which, I must say, has been *nil*, owing, I think, to the want of a Medical Health Officer or Sanitary Inspector.

My knowledge of the sanitary condition of the municipality extends no further than my duties as a physician, and as this report should embody the report furnished me by the Medical Health Officer must of necessity, be incomplete.

In so far as I know the health of the people has been better than some preceding years. Only three cases of Intermittent Fever have come under my notice during this year, some four cases of Scarlet Fever, many cases of Whooping-Cough and Measles; no Diphtheria, no Small-pox or Typhoid Fever. In the southern part of the township where the water supply is mostly surface, there have been quite a large number of cases of Remittent Fever. The clearing and draining of many of these lands, now in active progress, cannot but lessen the prevalence of this and kindred diseases.

I am fully satisfied that a Local Board of Health actively engaged in carrying out the provisions of *The Public Health Act*, will be the means of lessening disease, thereby increasing the happiness and wealth of our citizens.

In conclusion, I wish to say that if it devolves upon the Local Board of Health to appoint a Sanitary Inspector for the coming year, due consideration should be made as to the fitness of the person undertaking the duties of that office, as he will have no sinecure.

A. J. COLLVER,
Chairman.

FRONTENAC.

Olden Township.

CHAIRMAN AND SECRETARY'S REPORT,

The Board having learned that Small-pox was in the neighbourhood of Tweed and other places to the west, after consulting the statute in that behalf, it was moved by Mr. Flynn, seconded by Mr. Coulter, and resolved :—That the Chairman and Secretary proceed to employ Dr. Finney, of Arden, Township of Kinnebec, and he be directed to proceed with vaccination in this township.

Moved by Mr. Price, seconded by Mr. Coulter, and resolved :—That the following places be named or appointed for the inhabitants to meet said Dr. Finney, viz. :—Mountain Grove, R. Flynn ; Long Lake, Mr. Bender ; Coulter neighbourhood, J. Coulter, Jr. ; Lyon neighbourhood, Wm. Lyon : Oso Line, Joshua Cox.

JAS. SANDERSON, Chairman.
JNO. D. PRICE, Secretary.

SIMCOE.

Orillia and Matchedash Township.

SECRETARY'S REPORT.

As it is required by section 24 of *The Public Health Act, 1884*, that the Secretary of each Local Board of Health should draft an annual report of the sanitary work done during the year, and of the sanitary condition of the municipality, I have great pleasure in being able to congratulate you on the small amount of actual work that has been required of you during the present year.

So far, I am happy to report that there has been no case of any contagious disease of any kind reported to me as having occurred in your district, either by the members of the medical profession, or by the several members of the Board who were appointed as Sanitary Inspectors under by-law number 178 of your municipality ; and in the few cases of nuisances that were brought to the notice of the Sanitary Inspectors, they were at once remedied by the offending parties as soon as notified by those officers.

The several amendments to the general by-law, Schedule A (advised by you at your last meeting), and your proposal to divide the municipality into sanitary districts under the special supervision of the member of the Board residing in the same, were at once assented to by the Municipal Council, and a by-law introduced and passed confirming your various suggestions. I have also great pleasure in being able to congratulate you on the sanitary condition of this municipality, which is quite satisfactory as far as has been reported to me.

No individual Health Officer having been appointed by you, I am unable to submit his report, as required by section number one, Schedule A.

ALBERT FOWLIE,
Secretary.

SIMCOE.

Township of Oro.

MEDICAL HEALTH OFFICER'S REPORT.

During this year, as during every other year for the last ten, the Township of Oro has been practically free from the influence of malaria, the subtle poison that in so many parts of Ontario depresses the energies of the people by fevers and by general unhealthfulness. So, too, it has been all but free from Phthisis—a disease which, as a death factor, heads the lists in all countries within the temperate zone. The cause of this immunity is not far to seek. Dampness of soil and Consumption stand to each other in the direct relation of cause and effect. This is no longer a theory,—it is a fact as well established as that the decomposition of vegetable matter in the presence of heat and moisture, is the cause of malarial diseases. Oro being elevated one to two hundred feet above Simcoe Lake level, having in its northern third an exceptionally porous soil, sandy, and with but little organic matter to undergo changes in it, and having as a rule good natural drainage in the rest of its extent, escapes that soil saturation which adds so largely to the mortality elsewhere. Typhoid and Scarlet Fevers, the diarrhœal group, Pneumonia, Bronchitis, and Diphtheria are all with us mild in type and of exceptionally low mortality. Mild epidemics of the contagious diseases having a tendency to become malignant chiefly as they affect those with unhealthy surroundings, our epidemics remain as a rule with but little inherent death tendency.

During this year but one epidemic has prevailed to any considerable extent in our township. The disease in question was Mumps, and the epidemic was peculiar, in that fully one-half of all the cases occurring in our sex manifested that untastatic or wandering tendency which, in the ordinary lay mind, is the cause of so much dread as to impair future usefulness.

The thoracic diseases were, as usual, very prevalent in March and April, and Pleurisy with effusion was quite exceptional in the frequency of its occurrence. The abdominal diseases, attended by Diarrhœa, were late in manifesting themselves, and only reached their maximum in October.

All sanitary measures being based upon vital statistics, the reports on births, marriages and deaths issued by the Ontario Government are valuable publications. To possess our confidence, statistics of this kind must be reasonably complete. The Ontario system for their collection is doubtless a good one, but I have reason to know that all, or nearly all, the deaths are not reported under it. Not a few physicians make no death returns at all, and do not mean to make any till compelled to do so, or till paid for so doing. As this is one of the perhaps too few points in which your Medical Health Officer is without sin, he feels disposed to bring it up here. As a suggestion, if the blanks (Schedule E) now supplied for the use of medical practitioners in the registration of deaths were printed on stiff paper in the form of double post cards, hinged at the end and provided with flap; if, also, they were marked "For Registration, Free" in the position where a stamp is ordinarily affixed, and had printed on them the penalty for non-compliance with the law in respect to the registration of deaths, I believe this duty would be less neglected, and the value of the facts collected would be correspondingly increased. This plan (which is similar to that adopted by the very efficient Secretary of the Ontario Board of Health, in collecting weekly reports as to the health of various sections of the Province), would reduce to a minimum the work required from the medical attendant, and would put a stop to the pilfering by Government of the doctor's stationery. I wish to suggest, also, that a report to this Board by its Secretary, who is the Registrar of vital statistics for this district, showing the number of deaths in each of the ten highest causes of death, with other facts, would be of interest, and might be published in the local papers, as the reports of the meetings of the Township Council are. The Ontario report gives statistics by counties but not by townships. For one thing, a report such as that suggested would, in my opinion, establish the fact that the township in which we live is one of the safest spots in Canada for the residence of those with Phthisical tendencies.

Since in some of the larger cities *one-half* of all the inhabitants are more or less tubercular (example, Boston; authority, Dr. O. W. Holmes); and since in Ontario this percentage of deaths due to Phthisis is increasing, such a fact, if established, could not fail of being valuable. In different counties of Ontario the percentage which the death rate from Consumption bears to the total death rate will vary from five to seventeen per cent. For the whole Province it was, in 1882, 11.3 per cent. With us, taking one year with another, I am strongly of the impression that it does not reach three per cent.

Doubtless the hardy race from which the first settlers of Oro sprang, transmitting to their descendants no tubercular taint, should receive a part of the credit for our comparative freedom from tubercular disease. Some, it is said, "are born to Phthisis, some acquire Phthisis, and some have Phthisis thrust upon them." The cases seen by the writer here have almost entirely belonged to the second class, and have resulted from neglected colds, from exposure, or from causes of that nature.

N. A. POWELL, M. D.,
Medical Health Officer.

GREY.

Osprey Township.

SECRETARY'S REPORT.

The Local Board of Health of the Township of Osprey, in presenting its first annual report, is thankful to have to report that the sanitary condition of this municipality throughout the year has been uniformly good.

That in some cases the Board ordered the removal of animals confined too near dwelling-houses, and the thorough cleaning and disinfecting of the premises, which were promptly complied with.

This Board has not appointed any Health Officer.

There have been no cases of Small-pox, Scarlet Fever, Measles, Diphtheria, Whooping-Cough, or Typhoid Fever in this municipality during the year passing.

No precautions are taken in regard to isolation, disinfection of clothing, etc., but as there has been no cause, no reduction.

About one-eighth of this municipality consists of marsh or swamp, partly covered with stagnant water.

There are now no nuisances such as neglected slaughter-houses, etc., in this municipality.

WM. MILNE,
Secretary.

OXFORD.

Oxford East Township.

SECRETARY'S REPORT.

We have a Local Board of Health in this township, but nothing has been done beyond organizing and getting ready for work. No diseases of an infectious or contagious nature have come amongst us, and our township is in a good sanitary condition.

JAMES G. PETTIT,
Secretary.

OXFORD.

Oxford North Township.

SECRETARY'S REPORT.

The objects engaged in by the Board have been to enforce the provisions of the By-law in reference to slaughter-houses, and the inspection of cheese-factories. Complaints having been made to the Board that the slaughter-house situated on lot No. 11, 3rd concession, was kept in a filthy state, said slaughter-house being surrounded by dwelling-houses, the Board directed the Inspector to visit the premises and report to the Secretary of the Board, which was done. The parties were ordered to discontinue the slaughtering of animals on the premises for the future. The Board also ordered the Inspector to visit the other slaughter-houses and cheese-factories in the township and report to the Secretary. The Inspector reported as follows: Having visited the slaughter-house owned by Joseph Cann, ordered the same to be removed to the distance required by the By-law and be kept clean; visited the slaughter-house owned by James Gleeson, and found the same in a very dirty state; ordered the removal to the proper distance as required by the By-law, and to be kept clean; visited the cheese and butter manufactory on lot No. 13, 2nd concession; found everything inside clean and satisfactory, but the drain outside the premises in a filthy state, caused by the refuse from the factory; visited the cheese-factory on lot No. 1, 5th concession, and found everything inside clean and satisfactory, but the drain outside in the same state as the other factory.

A. HILLADON,
Secretary.

—
RENFREW.*Petawawa Township.*

SECRETARY'S REPORT.

This township is poorly settled, and the settlers live very scattered, in consequence our Board has not much work. We have not a Sanitary Inspector or Medical Health Officer, and the sanitary condition was during eighteen years a very fair one.

PAUL DANNHAUER,
Secretary.

—
WELLINGTON.*Township of Pilkington.*

SECRETARY'S REPORT.

The first meeting of the Board was held on the 9th day of June. All the members present. As there was no sickness of any kind in the township, it was decided not to appoint a Health Officer or Sanitary Inspector at present.

The second meeting was held on the 25th of November. All the members present, who reported that there were no cases of sickness in any part of the township at present, and there had been no cases during last summer; it was not considered necessary to appoint any Health Officer or Sanitary Inspector before the meeting of the new Board, and it may not be required then if the township continues in the same healthy condition.

ROBERT CROMAR,
Secretary.

FRONTENAC.

Pittsburg Township.

SECRETARY'S REPORT.

In conformity with the directions of the Public Health Act, 1884, the local Board of Health of the Township of Pittsburg beg leave to report as follows: That at their first meeting it was thought advisable to sub-divide the municipality into four divisions for the purpose of inspection, each member to take charge of the division in which he resided, the members to report at each meeting the sanitary condition of the division under his supervision; and in accordance with the Act, and resolutions adopted, we have performed the work, and may remark that we have found the township to be in a clean and healthy state, so that it was not necessary to appoint a Medical Inspector.

CHARLES BELWA,
Secretary.

LAMBTON.

Plympton Township.

SECRETARY'S REPORT.

I have to report that although there is a Local Board of Health in this municipality, yet it is in an inactive condition. Know of no diseases which can be traced to the closeness of privies to wells, but cannot say at what distances they are placed asunder. No cases of Small-pox, Scarlet Fever, Measles, Diphtheria, Whooping-Cough, or Typhoid Fever. I am sorry I could not reply to your circular sooner, but it was hard to get all the members of the Board together. I hope the above will be sufficient.

J. R. K. SCOTT,
Secretary.

GREY.

Proton Township.

CHAIRMAN'S REPORT.

I have the honour to present the report of the Local Board of Health and beg to state that we have made little progress beyond the appointment of the members and the organization, as no Medical Inspector was appointed by the Council. We arranged that the members should act in their localities as they deemed best to carry out the provisions of the Act—cards, etc., being procured for distribution, as necessity might arise. I am happy to state that there has been no call for united action to contend against any special disease up to the present date. The health of the community has been good. The police-village of Dundalk, which, from the location, might be subject to miasmatic diseases, has been exceptionally free from such, arising, I have no doubt, from the system of drainage just completed through and around it, and the exertions of the police trustees in enforcing sanitary precautions in the village, thereby removing all fear of endemic disease. This satisfactory state has been attained by the spirit exhibited by the inhabitants in taxing themselves for such beneficial purposes. We hope in time the example will be followed throughout the township when the people come to appreciate the benefits of Hygiene, as, from a sanitary point of view, we are in a primitive state.

PETER MCGREGOR,
Chairman.

HALDIMAND.

Rainham Township.

CHAIRMAN AND SECRETARY'S REPORT.

The condition of this township is now, and has been for the year past, very healthy, and such being the case we did not see the necessity of forwarding the questions and answers on page 148 of the Second Annual Report. We have no Medical Health Officer appointed as yet. Hoping this will be found sufficient for all the purposes required by you, we have the honour to be,

EDWIN HOOVER, Chairman.
R. A. HAVILL, Secretary.

KENT.

Raleigh Township.

SECRETARY'S REPORT.

The Local Board of Health of this township has not done much specific work since organization. There is a Medical Health Officer in connection with the Board. I have not the slightest doubt but that wells are contaminated in many cases from their too close proximity to outhouses and other sources of pollution. Scarlet Fever, Whooping-Cough, and Measles have been prevalent in some parts, but have not been reported to this Board. There has been one case of Diphtheria reported. Majority of the people have no idea of isolation, it being considered very unfriendly by many not to call, no matter what the disease in the family may be. Sanitary education will have to be resorted to by the Board in order to do away with this and many other queer ideas.

J. G. STEWART,
Secretary.

ONTARIO.

Reach Township.

CHAIRMAN AND SECRETARY'S REPORT.

As a Medical Health Officer or Sanitary Inspector for the township has not been appointed by the Council, the Board is not in a position to report as fully on the sanitary condition of the township as if such officers were appointed and in a position to report on the same; but from the general knowledge of the members of the Board, through residing in different parts of the township, they are able to say that the general sanitary condition is good, at least so much as can be expected in a rural municipality, but will be much better when the provisions of the Health Act are more fully known and better understood.

That for the purpose of the provisions of the Health Act being better known, the Board would recommend that a sufficient number of copies of the *Public Health By-law* be printed, or procured, so that one copy thereof can be left with or sent to each householder in the township, and that your assessor to be appointed for the ensuing year be instructed to deliver such copies at the time he is making his assessment.

They would also recommend that you pass the By-law mentioned as schedule B to the said Act, being a By-law respecting the Public Health By-law.

JOSHUA DOBSON, Chairman.
JOHN CHRISTIE, Secretary.

ESSEX.

Rochester Township.

SECRETARY'S REPORT.

The Local Board of Health for this municipality was organized on 26th of May last, but as the township has been free, with but few exceptions, from contagious or infectious disease, little has been done beyond organization. No Medical Health Officer has been appointed. No by-law has been enforced with respect to the disposal of excreta or privies, many of which are far too close to wells, the water of which is used for drinking and other domestic purposes, and far too little consideration is given to our water supply. There have been two cases of Diphtheria and one of Whooping-Cough reported. No Typhoid cases have been reported, but I am afraid there have been some. At last meeting I called the attention of the Council to the necessity of passing a by-law for the appointment of a Medical Health Officer, in order that the health of the municipality would be systematically looked after and diseases properly reported, and, if necessary, measures taken by him for their prevention or isolation.

P. J. FREEMAN,
Secretary.

RENFREW.

Township of Ross.

SECRETARY'S REPORT.

Your letter of the 2nd came to hand, and in accordance with the same I called a meeting of the Board for this township to meet in Cobden. They met, and as they reside in different parts of the township they had a better chance of knowing if any disease prevailed within the bounds of the township. There is no disease, nor has there been any for the past summer; therefore they made no report, nor has the Medical Officer made any to the Board. I received a book, headed "Notes of the Inspection of Premises," which seems to be for towns and cities. If you have any blank forms for township, send me some, as this is a new law, and we here in the woods are ignorant of the duties of the office; and if you would give us any information on the subject, it would be very favourably received.

JOHN REYNOLDS,
Secretary.

MUSKOKA AND PARRY SOUND.

Township of Ryde.

SECRETARY'S REPORT.

In accordance with the *Public Health Act, 1884*, sec. 24, I beg to report the sanitary condition of this township as really good.

At present time I do not know of one case of sickness. There have been no Zymotic diseases during the year, and, as the Chairman says, there is literally nothing to report except that our people are all well.

A. C. FLETCHER,
Secretary.

Township of Ryerson.

CHAIRMAN'S REPORT.

I have the honour of presenting to you the report of the Board of Health of this township for 1884.

Since the appointment of the Board there have been no cases requiring the action of the Board. The sanitary condition of the township is very fair.

ANDREW STARRUT,
Chairman.

—
ESSEX.

Sandwich, West, Township.

In regard to the report of the Local Board of Health appointed for this municipality, I have to tell you that I have inquired of the other members, and we thought that it was not absolutely necessary to meet except on account of disease, and as we have had no disease of any kind this year, even if we had met we would have no other report to make; but if you say that we should meet, I will notify the Board at once, and send you the result.

DENIS ROCHELEON,
Township Clerk.

—
BRUCE.

Township of Saugeen.

SECRETARY'S REPORT.

As a Board of Health officer I am glad to report there have been, so far as I can learn, no infectious or contagious diseases in this municipality since the Board was organized. The return of deaths since 1st July consists of one case of each—Apoplexy, Dropsy, Pneumonia, Diabetes, Senectus, 86 years—five in all.

ROBERT B. FLEMING,
Secretary.

—
YORK.

Scarboro' Township.

MEDICAL HEALTH OFFICER'S REPORT.

There is no township in this county that is better informed upon the subject of sanitary science than our own, and if each individual acted up to the knowledge that he has of this important subject there would be a far better condition of health prevailing throughout this community. In conversation with all classes of people, I find that their neglect of sanitary regulations arises not from ignorance of the organic laws, but from sheer recklessness regarding the most important interests of life.

The law of health, therefore, which has recently been made applicable to our municipalities, is simply the crystallization of public opinion which already existed in our

midst, and every intelligent man feels the necessity for the rigid enforcement of all the provisions of the enactment.

Therefore, I have endeavoured, to the best of my ability, to discharge my duty as a servant of the law as well as of this municipality. I have made a careful investigation of the hygienic conditions of this township, and find that our polluted wells, foul cisterns, defective drainage of cellars, and stagnant pools, arise from false notions of economy, and not from ignorance of the deleterious effects of the same.

Complaints have been made to me from different persons, which I am convinced have been well founded, that the ill-health of their families has arisen from impure water supply, as well as imperfectly drained cellars; and the parties being tenants their grievances have been unheeded by their landlords, and consequently remained unredressed.

You are well aware that the general concurrence of medical opinion at the present time points to specific germs as the sole cause of Typhoid Fever, Diphtheria and Scarlet Fever, etc. And that the universal experience of the medical profession goes to prove that most epidemic diseases are the result of defective drainage, impure air and the germs of disease carried by water from privies, water-closets and cess-pools into wells and other means of water supply.

How important then that the sources of drinking water should be absolutely pure, for water contaminated with these germs may look as pure as ever, and taste as cool and refreshing, and yet contain the seeds of disease.

It therefore behoves us that we, acting in accordance with the best medical opinion of the day, should see that the provisions of the law regarding the cleaning out of wells and thorough drainage of cellars be enforced.

Our Sanitary Inspector has exhibited a praiseworthy zeal in the discharge of the duties of his office; he has done much, but much more remains to be done. It would be well if he should take a general survey of our township, and find out by careful inspection whether the law is generally recognized, and to impress upon the delinquents the necessity of obedience.

A motion was passed by the Board that I should inspect the sanitary condition of the schools, and I must say that in most of the sections we may well feel proud of the capacious structures that have been fitted up with every regard for the comfort and convenience of our children.

What is most needed is the adoption of a uniform system of heating and ventilation. I would recommend Ruttan's Ventilating Heater as the most economic and effectual mode of warming an ordinary school-room. There is one in School Section No. 5 that has been in use for thirteen years, and Joseph Latter, Esq., teacher of the above school, says it only takes five cords of hardwood a year to keep a room 33 feet by 55 feet comfortable. The same school is protected by lightning rods, which gives pupils a sense of security during a thunder storm which they otherwise would not feel. Among the many methods of ventilation I prefer the galvanized perforated tube, extending from front to rear of every room and near the ceiling. By these means of heating and ventilation we avoid draughts, and reduce the impurities in the air of the school-room to a minimum, and obtain the most regular temperature possible for the expense incurred. Of course the hot-air system is becoming popular, but its cost interferes with its general use.

I cannot pass without referring to the water supply of our schools. In some sections they have no water at all, in others it is abominable. They say what is everybody's business is nobody's business. It is every parent's business to see that their children have good water, and yet our school children are obliged to drink filthy water, or depend on the neighbours for their supply. I ask you is it necessary that the trustees of schools in a wealthy township like Scarboro' should oblige our children to go begging for water?

In conclusion I would remark that the general sanitary condition of our township has been anything but good, Scarlet Fever has been prevailing in the north-east, and Typhoid Fever in the south-west for several months; there is, consequently, an urgent necessity that our health law should be strictly enforced.

L. D. CLOSSON, M.D.,
Medical Health Officer.

ELGIN.

Township of Southwold.

SECRETARY'S REPORT.

I cannot furnish you an elaborate report of the working of the Local Board of Health of the Municipality of the Township of Southwold, as the public health has been in general good. Scarcely any contagion in said municipality since the Local Board was organized; only two cases of Typhoid, one in the extreme western part of the township, and the other in the north-east part, both cases are steadily recovering. The Local Board in a body made an inspection of all the slaughter-houses and cheese-factories on the 15th day of last July, and generally found them in a bad sanitary condition, but since they were all cleansed and placed in better condition; but there remains much active work to be done, particularly in villages, as the people are very careless about keeping their dwellings and surroundings in a proper sanitary condition. The Local Board is so appointed as to place one member in each ward of the township, and each looks after his own ward, and acts as Inspector in his ward. In some of the wards several visits have been made of inspection. There is no doubt but the case of Typhoid referred to in the western part of the township was caused by a cesspool or an old cellar, full of stagnant water for years, in the immediate vicinity of the case. I fear that the greatest trouble in the way of working the Act successfully will be the lack of moral courage of members doing their duty for fear of offending some persons, but that should not be allowed. Local Boards in the interest of the public health should be compelled to do their duty as required by the Act.

M. CAMPBELL,
Secretary.

—
RENFREW.*Township of Stafford.*

CHAIRMAN'S REPORT.

The Board of Health of the Township of Stafford have met once, and have agreed to adopt all the clauses submitted by the Provincial Board of Health, except Rules 10 and 11.

We have not got any report from the Medical Health Officer yet as to the sanitary condition of the township. So far as we are aware, there has been no disease dangerous to public health during this year.

HENRY CHILDERHOSE,
Chairman.

—
WELLAND.*Stamford Township.*

SECRETARY'S REPORT.

In accordance with instructions from the Provincial Board of Health, dated Toronto, October 21st, 1884, the Secretary of the Board of Health for the Township of Stamford begs to submit the following:

We have a Local Board of Health duly organized and ready to take action if necessary, but from the healthy position of the municipality, no complaints were made to any member of the Board by any of its inhabitants, consequently nothing was done.

JOHN A. ORCHARD, Chairman.
F. A. HUTT, Secretary.

VICTORIA.

Township of Stanhope and Sherbourne.

SECRETARY'S REPORT.

In compliance with your request of the 21st ultimo, I called the Local Board of Health together to ascertain what had been done. The report was nothing; no cause for action, only what I had done myself, which was to cause the spring supplying water for school section No. 2 to be cleansed and properly taken care of; also, one case of Scarlet Fever, the precautions taken with which prevented its spreading.

JAMES MELVILLE,
Secretary.

HURON.

Township of Stephen.

SECRETARY'S REPORT.

We have a Local Board of Health here, but as yet they have not exhibited sufficient energy.

I shall give privy-pits and wells greater attention. I am strongly of the opinion that the well and privy of a certain school-house in this township are on too neighbourly terms or proximity, not being more than about thirty feet apart, and not removable nor ever cleaned out. Every fall the said section is affected with Croup, Diphtheria, Dysentery, Typhoid Fever, etc. Whooping-Cough and Typhoid have been very prevalent, some of the latter proving fatal.

Steps are being taken to cause slaughter-houses to comply with sanitary regulations. A large drain has reclaimed a large tract of land.

C. PROUTY,
Secretary.

MUSKOKA AND PARRY SOUND.

Township of Stephenson.

SECRETARY'S REPORT.

A Local Board of Health has been organized, but it is not active, and has not appointed a Medical Health Officer. Privy-pits are allowed to go on as usual, nothing being done to ascertain whether they are in a filthy condition or not. I believe the water in the wells is not very much affected by privies. General health is good.

DANIEL BAIN,
Secretary.

Township of Stisted.

SECRETARY'S REPORT.

The Local Board of Health met at the Orange Hall, Stisted, November 20th, to report on the sanitary condition of the municipality. Their report shows that there has been no cause of complaint throughout the township, and that the municipality is in a

very healthy state, there being only three deaths in the township for this year, and the causes are one of dropsy, one of general debility, one of inflammation. The population of the township is 686.

THOS. LAKEMAN,
Secretary.

Township of Strong.

CLERK'S REPORT.

I am in receipt of your circular of October 21st, and in reply would say that I have repeatedly laid this matter before the Council, but no action has been taken in the matter. Of course this township is but newly settled and not so liable to be visited by any scourges or plagues as one more thickly populated, but still there is nothing like being forearmed for a visit of any of these epidemics. I also suggested a union of the Townships of Armour and Strong to be formed into a health district, and I believe if the Township of Armour had moved in the matter our Council would have also have taken some steps, but as yet the matter lies dormant. If you think it advisable that we should organize please write me at once and I will again lay it before the Council on the 16th December. You might also write the Clerk of Armour, as I believe the two municipalities can be worked more cheaply jointly than separately.

G. E. GIBBON,
Township Clerk.

SIMCOE COUNTY.

Sunnisdale Township.

CHAIRMAN AND SECRETARY'S REPORT.

Our population is about 2,650, mostly farming or at lumbering, etc. The health of the municipality has been exceedingly good and very little disease for the past season, for which mercy we feel devoutly thankful; and therefore the Board has not been called upon to use active measures.

There are no slaughter-houses in the municipality.

The Medical Health Officer having never been called on as such, has no report to present for this year.

It is desirable that the Provincial Board send the Local Secretary a printed form of report which would exactly contain the items most useful and interesting to report on to the General Board.

ROBERT PATON, Chairman.
GEORGE BURROWS, Secretary.

GREY.

Sydenham Township.

CHAIRMAN'S REPORT.

The members appointed by the Township Council at its session held on the 9th day of September, 1884, are William Johnstone, Donald Baxter, and Martin Cathua.

The members of the Local Board of Health met on the 22nd day of September, and the Board was organized by electing William Johnstone, Chairman.

The Board passed a resolution instructing the Secretary to have a number of the necessary notices printed in case of their being required.

The Secretary was instructed to notify the medical men practising in the municipality that they can obtain the necessary forms on application to him.

The Board, not being cognizant of any contagious disease in the municipality, have deemed it unnecessary to make any further provision at present, the time for the appointment of members for next year being so near at hand.

There being, as far as the knowledge of the Board is concerned, no contagious disease prevailing in the township during the year, I am happy to be able to report that the sanitary condition of the township is very satisfactory.

WM. JOHNSTONE,
Chairman.

WELLAND.

Township of Thorold.

SECRETARY'S REPORT.

This Board was organized on the 10th day of July last, and caused one hundred copies of the By-law to be printed and distributed throughout the township, and immediately afterwards proceeded on a tour of inspection throughout the municipality, in accordance with the Act. We inspected three slaughter-houses, issued permits for two, the third we found to be in an unsanitary condition; we forbade the parties interested from using it for slaughtering purposes, and to remove the building to a lawful distance from dwellings and roads, and also to remove the rubbish which had accumulated around the building, and to plow up the ground, using disinfectants; and for neglecting to comply, information was laid before a Justice of the Peace, the owner of the building was fined ten dollars and costs, and the occupant five dollars and costs. They afterwards complied with the law, and a permit has been granted for said building to be used as a slaughter-house. Otherwise we found the township in a good sanitary condition which at the present time exists. The Council of this municipality did not appoint a Medical Health Officer, but our Board has a physician a member of the Board, and he was appointed one of the Sanitary Inspectors of this Board.

PHILIP S. MUSSEN,
Secretary.

KENT.

Tilbury East Township.

SECRETARY'S REPORT.

I have the honour, pursuant to the provisions of Section 24 of *The Public Health Act, 1884*, to report as follows:—

1. As regards sanitary work done during the past year, I regret to say that very little indeed has been done. Blank forms on which to report certain diseases dangerous to the public health, were, as required by Section 17, Rule 1, of Schedule A, to the said Act, early in the season mailed or delivered to each medical practitioner practising within the township, but up to the present date only one case of Scarlet Fever, and one case of Diphtheria, have been reported to your secretary. From other reliable sources I am aware that many families, chiefly living in and around the Village of Tilbury Centre, have been visited by Diphtheria, and that no fewer than seven deaths from that disease have occurred in the township within the last four months. The absence of any report by the attending physicians, in so many instances, is much to be regretted, as implying a certain apathy in regard to sanitary matters in a quarter where it was least expected. I am satisfied,

however, that the Board have only to bring this matter more prominently to the notice of our local physicians in order to obtain their valuable assistance and co-operation.

2. *Sanitary Condition of Municipality.*—In this connection, so far as I am able to judge, the two great evils which confront your Board are Ignorance and Carelessness. As an effectual means of meeting the former evil, I beg leave to suggest to your Board the free and liberal distribution, amongst the people generally, through the municipal assessor or collector, of the sanitary literature published by the Provincial Board of Health. For the latter no remedy exists save the vigilance and vigour of your Board.

D. R. FARQUHARSON,
Secretary.

ESSEX.

Tilbury West Township.

SECRETARY'S REPORT.

The local Board of this township has not had the necessity of exercising many of the powers conferred upon it by the Public Health Act, as the sanitary condition of it is good, and the general health of the people also.

J. B. CHAUVIN,
Secretary.

PEEL.

Toronto Township.

SECRETARY'S REPORT.

Herewith I have the honour to present the first report of the Local Board of Health of the Township of Toronto.

We have a Board of Health, but not actively engaged. The Board has a Health Officer appointed by the Council. The Health Officer is a medical man. He is not a salaried officer. We would beg leave to further state that from the sanitary condition of the township, the Board has had no cause to take any active measure in reference to *The Board of Health Act*.

J. EAKINS,
Secretary.

HURON.

Tuckersmith Township.

CHAIRMAN AND SECRETARY'S REPORT.

We have the honour to submit the first annual report of the Local Board of Health of this township. A general supervision by members of Board has been adopted. It is hardly necessary to say that we have had a year exceptionally healthy. Our schools, ten in number, have been in operation during the whole year; and in only one, where three or four children were affected with Scabies, which was promptly treated by Dr. Campbell, has there been any sickness beyond the ordinary ailments of children; a slight cold, or an immoderate use of fruit, being a probable cause, but not preventing attendance at school more than a day or two.

JACOB McGEE, Chairman.
WM. McCONNELL, Secretary.

HURON.
Township of Turnbury.

CHAIRMAN'S REPORT.

The Board has much pleasure in reporting as follows: That after being duly organized in accordance with the Act, the members of the Board agreed to take the respective districts in which they reside to enforce the by-law as far as possible. That with the exception of the removal of one or two nuisances, the duties of the Board have been very light. That no cases of Diphtheria or fevers of any kind were reported to the Board as being in the schools, nor in the villages in the township, nor have any deaths from any of the above named diseases been reported to the Board. That so far as known to the Board no Diphtheria nor any malignant disease is in the township. That in the present state of good health in general the Board did not advise the appointment either of a Sanitary Inspector or Medical Health Officer.

JAMES ELLIOT, Chairman.
THOS. FORTUNE, Secretary.

HURON.

Usborne Township.

SECRETARY'S REPORT.

A Local Board of Health has been duly organized, but beyond that and the appointing of a Medical Health Officer (Dr. Irving) nothing has been done. Wells may be affected by excreta when too closely situated to privies or with surface water. Have not noticed any disease having its origin in the drinking of well-water. Very little disease other than a few cases of Whooping-Cough has occurred since formation of the Board. There are no slaughter-houses in the township.

N. J. CLARK,
Secretary.

SIMCOE.

Township of Vespra.

SECRETARY'S REPORT.

I beg to report as follows: That in accordance with *The Public Health Act* of Ontario a Local Board of Health for the Township of Vespra was organized in May last. That the Board has exercised its powers in removing all nuisances where found or reported. That there have been no cases of contagious diseases in the Township, and that the sanitary condition and public health of the township are satisfactory.

GEO. SNEATH,
Secretary.

WELLAND.

Wainfleet Township.

The Local Board of Health of the Township of Wainfleet beg to report as follows: There being no resident doctor in the township, the Board appointed no Medical Health Officer. The sanitary condition of the municipality has been good so far the present year.

is concerned. There have been no epidemic or contagious diseases except Whooping-Cough. This Board recognize the importance of local organization, believing that much may be done that would tend to prevent the spread of infectious diseases.

JOHN HENDERSON,
Secretary.

PERTH.

Wallace Township.

CHAIRMAN AND SECRETARY'S REPORT.

The Local Board of Health of the Township of Wallace met on the 29th November, 1884, and beg to report that the sanitary condition of the township is in a fairly good condition ; that there has been no epidemic, endemic, or contagious disease prevailing in the township during the current year

GEO. FOLLIS, Chairman.
R. G. ROBERTS, Secretary.

NORFOLK.

Walsingham Centre Township.

SECRETARY'S REPORT.

In yours of the 3rd November you say that the fact of the appointment of a Sanitary Inspector by the Board implies that it was considered necessary to do public health work. In this you are in error. First, the Municipal Council and not the Local Board appoints the Inspector. Second, the appointment does not imply that any health work was necessary, but simply that in case the services of that officer at any time became necessary it might be available without waiting for a regular or calling a special meeting of the Council to appoint him.

Fortunately his services have not been required, and the President of the Board declines to call a meeting merely to send a report of *nothing* done.

However, if a report is absolutely necessary, if you will kindly send the necessary blank form I will fill it up and return it to you, or have it filled and returned.

JOHN PHELAN,
Secretary.

WATERLOO.

Township of Waterloo.

CHAIRMAN AND SECRETARY'S REPORT.

The members of the Local Board of Health for this municipality were appointed by the Council on the 31st of May last, in accordance with *The Public Health Act, 1884*, and held their first meeting on June 9th, for organization. Messrs. Blaschke & Son, butchers, of the Village of Blair, were notified to remove their slaughter-house to such place as would not endanger public health, and in accordance with such notice they erected a new slaughter-house, which is beyond the limits prescribed by the Act.

The Secretary was instructed to prepare a compilation of the *Health Act*, embodying such sections as are particularly applicable to rural municipalities, and to have 1,200 copies of the same printed in English and 800 in German. This was done, and the same forwarded to the teachers in the several school sections for distribution among the residents in each

section; and other means adopted by which it is believed that a copy has been introduced into nearly every household in the municipality, thus insuring that the people will become acquainted with the provisions of the Act.

The Secretary also procured 250 copies of the blank forms for physicians to report on outbreaks of infectious diseases, death forms, etc., which were distributed among the physicians practising in the municipality.

Complaints were made to this Board that the creek running from the Town of Waterloo through Bridgeport to the Grand River, was seriously polluted by the waste and offal from the distillery and woollen factory in the Town of Waterloo. The owners of these establishments were notified by the Secretary of the Board to remove, or abate the nuisance; and, as they paid no attention to such notice, and in accordance with the provisions of *The Public Health Act, 1884*, the Secretary of the Provincial Board was appealed to. Dr. Bryce thereupon came and inspected the creek, and at once acknowledged its offensiveness, and the danger to which the public health was exposed thereby; and ordered the persons interested to at once abate the nuisance. In accordance with the advice of the Secretary of the Provincial Board, the proprietors of the woollen factory are having two filtering tanks erected, one of a capacity of 150 barrels and the other about half that size, which it is believed will in a great measure abate the nuisance.

The Secretary of the Board, in accordance with instructions, also notified the Secretary of the Waterloo Town Board to at once put a stop to the depositing of filth and offal of any description into the creek within the corporation.

There have been a few cases of Whooping-Cough during the year, but apparently of rather a mild type. There were also a couple of cases of Cholera Morbus of a very virulent type, which proved fatal in from two to four days. There were five cases of Typhoid Fever reported, one of which proved fatal, a female aged twenty-one years; but by the adoption of strict measures of disinfection and proper caution in regard to isolation, the disease in each case has been confined to the scene of outbreak. The general health during the past year has been about as good as the average of former years, although there has been a marked increase in the death rate, which, however, has been among persons well advanced in years and children of tender age.

T. B. SNIDER, Chairman.
GEO. A. TILT, Secretary.

MUSKOKA AND PARRY SOUND.

Watt Township.

CHAIRMAN AND SECRETARY'S REPORT.

The Local Board of Health have much pleasure in stating that the sanitary condition of this township is in a very satisfactory state. The Board have also much pleasure in stating that no outbreaks of disease of any kind have occurred during the year; three deaths only have taken place in the municipality during the year, two of the above deaths being from old age and the other being an infant; this out of a population of 800 is most satisfactory.

A. SUFFERN, Chairman.
FRED. RICHARDSON, Secretary.

HURON.

Township of Wawanosh East.

CHAIRMAN'S REPORT.

The Board beg to report that the sanitary condition of the Township of East Wawanosh, so far as each member of the Board is aware of, is at present good; that no

contagious disease of any kind, so far as they are aware, is to be found within the limits of the said township; and that we have no village within the precincts of the Township of East Wawanosh.

At present they have no Medical Officer or Sanitary Inspector.

The above is all the report of the said Local Board of Health for the Township of East Wawanosh for the year 1884.

JAMES McCALLUM,
Chairman.

WENTWORTH.

Township of West Flamboro'.

MEDICAL HEALTH OFFICER'S REPORT.

I beg leave to submit the following as regards the health of the township: It has been remarkably good, the only epidemic which prevailed in this district was Scarlet Fever of a very mild type, of which there were nineteen cases, the ages ranging from $1\frac{1}{2}$ to 13 years, and no deaths. I have been at a very late period informed that there were some cases of Scarlet Fever and Whooping-Cough, which have not been reported by the medical practitioner in attendance on such cases.

A. W. SHAVER, M.D.,
Medical Health Officer.

Township of West Flamboro'.

SANITARY INSPECTOR'S REPORT.

I beg leave to submit to you a summary of the sanitary condition of the Township of West Flamboro', of which I have been appointed Inspector, for the year 1884.

The slaughter-houses situated in the township, although not altogether under the requirements of the Act, are kept in such a condition that they fail to become a nuisance or any way a detriment to the public health.

The villages of Freelon, Strabane, West Flamboro', Milgrove, Greensville and Bullock's Corner, I also visited, and found them all in a good sanitary condition, and found nothing that would cause a nuisance or would be prejudicial to the public health.

And in conclusion I beg leave to state that in taking a summary review of my visitations throughout the township, I find that it is in a very satisfactory state, all of which I humbly submit.

CHAS. FOSTER,
Sanitary Inspector.

WELLINGTON.

Township of West Luther.

CHAIRMAN'S REPORT.

Your Board of Health beg leave to report that they met pursuant to statute, on the 9th day of June, 1884, and organized at the house of Mr. Huball Damascus.

Sanitary Inspector Brisnahan called the attention of the Board to the stagnant water in the Jordan Creek.

After examining the same we instructed the Sanitary Inspector to notify the owners of the land where there was stagnant water to have all obstruction removed from the bed of the Creek, so as to give the water a free course, and to have it straightened from the bridge on the side line between lots 9 and 10, con. 6, to the bridge on the 6th and 7th concession lines on lot 9.

On the 19th day of July your Board met for the purpose of reconsidering a change in the bed of the Creek. Thomas Graham, on whose property the stream runs, objected to the straightening of the same from the bridge on the side line on account of its coming so close to his saw mill, but agreed to a straight line from the bridge in his mill yard to the 6th concession line, which was agreed to by your Board, all of which has been completed.

As no cases of sickness in the municipality have been reported to us, your Medical Health Officer has never been called on by us.

JAMES ISLES,
Chairman.

SECRETARY'S REPORT.

To the several questions of your circular I beg to reply as follows :—(a) The digging of a watercourse to purify a stream in the vicinity of a steam saw mill has been done. (8) In too many cases, I fear, thrown from the door-step. (9) Mostly goes to swill barrel for the pigs. (10) Not that I am aware of. (11) From wells. (12) Some of the wells must be sadly contaminated by refuse and filth, especially urine. I would strongly recommend the Provincial Board to have the clause respecting the cleaning of wells made compulsory, and once *every* year at that. (18) Measles being the only contagious disease prevalent this year, no precautions were taken to guard against it, as it is a disease not much feared by country people. (20) There is a lake on the borders of this municipality of stagnant water of small extent, less, I think, than 20 acres; again, there is stagnant water at a saw mill in the very centre of the township, which I believe to have been the breeding ground of the diphtheria cases in the township those past years.

JAMES McLUHAN,
Tp. Clerk.

MIDDLESEX.

Township of Westminster.

CHAIRMAN'S REPORT.

Our Local Board was organized by a by-law of the Municipal Council passed June 4th, '84. H. Anderson was appointed Inspector and instructed to inspect all the cheese factories and slaughter-houses in the township, and give those in good order written permission to continue their business, and to insist that those not in good order should be put in proper shape to be entitled to a permit; we have six cheese factories and six slaughter-houses in the township. Most of them were all right, but several were found in a miserable, filthy state, certainly dangerous to the health of the people in the vicinity. I am happy to say that there was no disposition on the part of the owners to dispute our authority or resist the law, so that with little difficulty we have got them all in good shape, although it cost the owners considerable in some cases for drainage and other work.

The establishment of the Board is very popular in this township, nearly all acknowledging that it was a necessity.

Our Council got 200 copies of the Health By-Law printed for distribution, striking out some parts that we considered unnecessary in a township. I send you a copy. We have also got the other forms required by law printed.

Our township has been very healthy this year. We have had no epidemic or infectious diseases except a few isolated cases of Typhoid Fever. We have held four regular meetings of the Board this year to receive the reports of the Inspector and to investigate complaints about bad wells, privies, etc., all of which we got satisfactorily settled.

The expenses of the Board for this year have been about \$60, which has been willingly paid by the Council.

J. T. COUGHLIN,
Chairman.

 OXFORD.
Township of West Zorra.

CHAIRMAN'S REPORT.

The Board of Health for the Township of West Zorra beg to report :—

1st. That the Board was formed in accordance with the Act, being composed of the Reeve, Clerk, John A. McKay and John Blair, members of the Council, and James McKay.

2nd. That the by-law, with some slight amendments to adapt it to a rural municipality, was adopted by the Council.

3rd. That the sanitary condition of the township is good, and that there has been no epidemic during the year.

JAMES MUNRO,
Chairman.

 ONTARIO.
Whitby East Township.

SECRETARY'S REPORT.

As no complaints were lodged, the Board did very little sanitary work during the early part of the season, but later on in the year a petition was presented to the Board, requesting them to attend to some stagnant water in the neighbourhood of Cedar-Dale.

The Board, as a Committee of the Whole, met in Cedar-Dale, and examined the cause of complaint. They found that although no water was then standing on the premises complained of, and that no disagreeable smell emanated therefrom, yet evidently a nuisance had existed there a short time previously. The Secretary was directed to correspond with the owner of the grounds and request him to drain and level them. I understand the request of the Board has been complied with.

The Board also examined the condition of the Grand Trunk Railway Company's Freight Sheds, in Cedar-Dale, (Oshawa Station), and found them in a state disgraceful to the company that controls them.

The Secretary was instructed to notify Mr. Bell, solicitor of the company, of the true state of affairs. No reply was received to the communication.

East Whitby being a rural municipality, and there being no Sanitary Inspector it is difficult to state the exact sanitary condition of the Township, but I believe it compares favourably with the majority of municipalities in the Province.

I do not know of a single case of Typhoid Fever, Diphtheria, or other contagious disease in the Township.

WILLIAM PURVES,
Secretary.

Whitby West Township.

SECRETARY'S REPORT.

A Board of Health for the aforesaid municipality was appointed by the Township Council on the second day of June, 1884.

No Medical Health Officer or Sanitary Inspector has been appointed for the municipality.

At a meeting of the Board held June 16th, there was a Committee appointed to make selections from the Act in reference to sanitary measures and public health, and have the same printed for distribution in the municipality.

Said Committee have performed their duty, and have caused notices to be printed, calling upon the inhabitants of the Township to endeavour by cleanliness in their premises, water courses, wells, etc., to aid in the prevention of disease, and to report to Board of Health any nuisance or filthiness coming under their observation, which they deemed detrimental to the good of individuals or the community.

Only one complaint has been received by the Secretary, that of the 7th instant, which has not as yet been acted upon by the Board.

The municipality has not been visited to any great extent by any contagious, or infectious, or other disease during the year.

D. HOLLIDAY,
Secretary.

YORK.

Whitchurch Township.

SECRETARY'S REPORT.

I am instructed by the Local Board of Health of the Township of Whitchurch to acknowledge the receipt of note book and memorandum for the use of Inspector, and to say, by way of our report, that beyond organizing we have not been called upon to do anything.

There has been no case of malignant or infectious disease reported in the township and the Inspector has not been required to make any inspection. Hope this state of things may continue.

J. W. COLLINS,
Secretary.

WATERLOO.

Wilmot Township.

SECRETARY'S REPORT.

It gives me much pleasure to state that the sanitary status of our township has been during this year in a most excellent and healthy condition, to which effect also all members of our Local Board have expressed themselves at our last meeting, held November 24th, 1884. During the year, up to date, only two cases of death have been sent in for registration of a zymotic disease, namely, Whooping-Cough, which resulted in the death of two small infants.

Much improvement has been going on in late years by draining waste and swamp lands. I also may state that no complaints of the existence of any stagnant water came to my knowledge.

According to a resolution passed by our Local Board of Health, all dead animals, also refuse from slaughtering-houses and tanneries must in future be buried or disinfected.

You will please find enclosed the report of A. H. Miller, M.D., Medical Health Officer for the Township of Wilmot, with the Secretary's report to Provincial Board of Health, which were adopted at the last meeting, November 24th, by the Local Board of Health.

HENRY LIERSCH,
Secretary.

MEDICAL HEALTH OFFICER'S REPORT.

It is a matter of congratulation that the Municipality of the Township of Wilmot, acting upon the recommendation of the Provincial Board of Health, has established a Local Board to look after the sanitary interests of the township.

I may also congratulate the Board of Health of the Township of Wilmot upon the freedom of the municipality from any of the zymotic diseases, none of them being prevalent during the year.

A. H. MILLER, M.D.,
Medical Health Officer.

MIDDLESEX.

Williams East Township.

SECRETARY'S REPORT.

In compliance with the requirements of the statute, I now beg to lay before you the annual report of the sanitary work done during the year, and of the sanitary condition of the municipality, for your consideration.

Respecting the first, with the exception of the burial of a dead horse, no sanitary work has been required, and in regard to the sanitary condition of the municipality it affords me heartfelt pleasure to be able to report that it never was better. There has not been a single case of contagious disease in the municipality during the entire season of 1884.

D. WYLLIE,
Secretary.

WATERLOO.

Township of Woolwich.

CHAIRMAN'S REPORT.

In accordance with the provisions of *The Public Health Act of Ontario, 1884*, the members of your Board met at St. Jacobs on Monday, the 19th day of May, 1884, and organized as follows :

Mr. J. P. Snyder was appointed Chairman, and Mr. John L. Wideman, Secretary of the Board.

A committee was appointed with instructions to select certain sections and clauses of *The Public Health Act of 1884*, and to get the same printed in circular form and sent to the ratepayers and householders of the municipality, which instructions were subsequently carried out as follows : The selections were made by the committee and submitted to the Board for approval at a subsequent meeting and adopted, and instructions given to the Secretary to get six hundred copies in English and four hundred copies in German printed and distributed as above directed. The circulars were sent out in the name of Dr. Pasmore, as Medical Health Officer and Sanitary Inspector. Applications were made during the year for permits for keeping slaughter-houses. After due inspection by the Sanitary Inspector and favourably reported on, permits were granted.

Various other applications and complaints were heard, and after due inspection by the proper officer, were arranged and settled.

J. P. SNYDER,
Chairman.

SANITARY INSPECTOR'S REPORT.

I have the honour to report to you that the state of health of this township is and has been during the year 1884, on the whole very good. There have been a few cases here and there of Scarlet Fever, Diphtheria and Typhoid Fever, and Dysentery was slightly epidemic for a few weeks in the fall.

No reports were made to me.

The Act has, I think, done great good, especially in the villages, where some privies and slaughter-houses were getting to be offensive. I did not make a house to house inspection, as the Board directed me to attend to cases only that were in some way brought to my notice. A circular containing the most important parts of the Act was issued, and a copy sent by mail to every ratepayer. It was productive of good, as a number of farmers told me that they would build new pig-styes at the required distance.

H. J. PASMORE,
Sanitary Inspector.

ELGIN.

Yarmouth Township.

SECRETARY'S REPORT.

The Board met once, and inspected slaughter-houses. Improvements were ordered and attended to. Other meetings were called, but could do nothing for want of a quorum.

K. W. MCKAY,
Secretary.

LEEDS AND GRENVILLE.

Yonge, Front of, Township.

CLERK'S REPORT.

In reply to your letter of October 21st, I can only say the Council of the Township of Front of Yonge declined to organize a Local Board, consequently I am sorry to have no report to make. I readily understand the importance and the good that might be derived from such a Board. I have no authority from the Council to state their reasons for not moving in the matter; in fact I do not know them.

M. J. CONNOLLY,
Clerk.

KENT.

Township of Zone.

MEDICAL HEALTH OFFICER'S REPORT.

Having only recently been appointed Medical Health Officer for the Township of Zone, I cannot make as lengthy a report as I would otherwise do. I might say, however, that there has been very little sickness in the southern portion of the township. There has been no contagious or infectious disease, with the exception of one isolated case of Typhoid Fever.

Should I be honoured with the appointment for another year, I will endeavour to make myself better acquainted with the sanitary condition of the whole township.

R. D. SWISHER, M.D.,
Medical Health Officer.

* VICTORIA.

Township of Mariposa.

SECRETARY'S REPORT.

The Council appointed members and officers to the Local Board of Health in May, 1884. Since the Board was organized several meetings have been held, in order to carry out the requirements of the Statute respecting Public Health. The Sanitary Inspector made a thorough inspection of each Village in the Municipality, and his report to the Board shewed the following results:—He ordered five cellars to be cleaned out; twenty privies to be cleaned out, and some of them to be removed; eleven notices were given to parties to remove manure heaps; twenty-one pig-pens were ordered to be cleaned, and some of them to be removed altogether; eight wells and eight cisterns were ordered to be cleaned out. We have the pleasure to report that in each of the above named cases, the inhabitants readily carried out the instructions of our Sanitary Inspector.

Annexed you will please find the Report from our Medical Health Officer. The Council have ordered a number of copies to be printed of said Report, for distribution among the ratepayers of the municipality.

JOHN F. CUMMINGS,
Secretary.

MEDICAL HEALTH OFFICER'S REPORT.

Since my appointment in May last as your Medical Health Officer, I have given some special attention to the sanitary condition of the municipality, and I congratulate you upon the fact that, speaking in a general way, the sanitary condition of the Township may be called good. We have in this Township no large lumbering operations, saw-mills, or factories, around which constantly accumulate large quantities of decaying organic and vegetable matter, producing miasms and noxious gases, rendering the air impure and thus engendering disease.

Swamp lands which hold more or less stagnant water, exist to a considerable degree in the township, but these are being gradually cleared up and drained, which will, in time, enhance the sanitary condition of the municipality considerably. Our township being almost purely agricultural in its pursuits, and the farmers generally in easy circumstances, their dwellings and outhouses are, as a rule, large and commodiously built; yet, in one important particular, we frequently find the dwellings deficient. When erecting those fine, large, brick houses, special attention seems to be given to the conservation of heat, and the very important matter of ventilation entirely overlooked. In days gone by, when more moderate circumstances prevailed, and the old log house was the place of abode, our families grew up robust and healthy, and a large factor in this result was due to the free and natural ventilation of those homes. In building, now-a-days, every precaution is taken to exclude the fresh air and keep the heated air within. The science of ventilation is one well worthy the investigation of our people at the present day, as living in close rooms and breathing the same air over and over again, is a prolific source of many serious diseases.

Your very efficient Sanitary Inspector has made thorough inspection of our little villages, and the result is a pretty general reform in the sanitary condition of many houses, yards and streets. Under his directions, wells, cisterns and cellars have been cleaned and disinfected; sink-holes filled up, and manure and other decaying matters removed, which had previously been considered a nuisance. As a whole the people have, much to their credit, responded to those calls with alacrity.

The Board of Health and the township are to be congratulated on the fact that we

* NOTE.—These reports are inserted here, they having been omitted from their proper alphabetical position.

have not been visited by any serious epidemic of contagious or infectious disease during the past season. There have been reported of typhoid fever only three cases, two of which occurred in the Village of Oakwood, and one in the Village of Little Britain, all of whom recovered ; one case of Diphtheria in the Village of Oakwood recovered ; one case of Whooping-Cough in the Village of Manilla, which case, being complicated with Bronchitis, died ; two cases of Mumps are reported from the Village of Oakwood. The above is a complete list of all cases reported, and is, we think, a very favourable showing as to the sanitary condition of the municipality. Had the sanitary condition of the neighbourhoods in which those cases of Typhoid Fever occurred, been poor, the probabilities are that more cases would have been reported, and that of a more malignant type, and of more fatal results.

We think it well to remind the Board of the fact that only a small proportion of the children, and we believe of the adults, possess the security that vaccination brings. We think the subject of great importance and it should not be neglected. Other Boards of Health are looking into the matter, and some means should be taken in this municipality to remind parents that it should be attended to ; the truth of the importance of this hint would be fully proven were we to have even one case of Small-pox develop in our midst. It would be well for people to understand that having been once vaccinated at some time in the past does not necessarily give them that security desired ; and seven or eight years, in the majority of cases, is as long as protection remains.

Hoping the few hints in the above may be useful, and the report, as a whole, may find your approval,

A. E. VROOMAN,
Medical Health Officer.

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